A STUDY INVESTIGATING WHAT DIFFERENT SUBGROUPS OF EDUCATIONAL STAKEHOLDERS EACH BELIEVES IS EFFECTIVE IN NEW TEACHER INDUCTION WITH AN OVERVIEW OF THE SIMILARITIES AND DIFFERENCES AMONG AND BETWEEN THESE GROUPS

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A STUDY OF WHAT DIFFERENT SUBGROUPS OF EDUCATIONAL STAKEHOLDERS EACH BELIEVES IS EFFECTIVE IN NEW TEACHER INDUCTION WITH AN OVERVIEW OF THE SIMILARITIES AND DIFFERENCES AMONG AND BETWEEN THESE GROUPS

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In any profession, there is always a period where new employees must learn to integrate themselves into their jobs and to become successful at what they do. However, newly hired teachers often are given the most difficult teaching assignments and left to "sink or swim" without the type of help provided by most other professions (e.g. American Federation of Teachers, 2000; Darling-Hamilton, 1996; U.S. Department of Education, 1998; Bartell, 2005; Grossman & Thompson, 2004; ERIC Clearinghouse on Teacher Education, 1999). The beginning teacher faces performing several duties while at the same time trying to learn those duties (Wong & Wong, 2001). This is all detrimental to the process of teaching and learning, ultimately affecting student achievement.

Improving student learning, therefore, relies on improving teaching (Stigler & Hiebert, 1999), and the goal of having a systematically planned program teacher induction should be to help new teachers not just survive, but to succeed and thrive (Bartell, 2005). Improving teaching for those new to the profession is thus necessary to maximize students' learning, knowing that the integration period for new teachers is crucial. Research shows that beginning teachers often struggle in their first few years due to a lack of usefulness of new teacher induction programs (U.S. Department of

Education, 2000), even though the early years of a teacher's career are the most formative, in which they establish patterns and practices that form the bases for the rest of their careers (Bartell, 2005). Sound induction programs are necessary, wherein new teachers are assessed and supported as they grow toward becoming expert classroom teachers (Berry, Hopkins-Thompson, & Hoke, 2002). Typically, veteran school personnel design and implement these induction programs. Therefore, there appears to possibly be a disjunction between what veteran administrators and teachers design for new teacher inductions versus what new teachers really need.

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Introduction

> She has been teaching for three years. Her students really like her. She's dedicated. She's energetic. She's creative…She's quitting.
>
> (Michigan Education Association, 2000)

The latter is taken from a brochure that advertised a summer institute; the brochure intimates that effective teacher induction programs are essential in retaining new teachers in the profession (Michigan Education Association, 2000). Very few teachers receive instruction on what to do at the beginning of the school year, which determines success or failure for the rest of the school year (Wong & Wong, 2001). Newly-hired teachers are typically given a key, told which room is theirs, and given little or no support after that (Wong & Wong, 2001). Often, novice teachers are immersed into administrative, organizational, collegial, legal, and traditional aspects of institutional life without being prepared to do so (Tickle, 2000). They typically carry larger classes, have more students, teach a higher number of different subjects, and are assigned more demanding assignments (Berry, Hopkins-Thompson, & Hoke, 2002).

In any profession, there is always a period where new employees must learn to integrate themselves into their jobs and to become successful at what they do. Many professions require internships, apprenticeships, residencies, and other related training, often before one may become a licensed professional. However, as Danielson and McGreal (2000) explain,

> *Teaching, alone among the professions, makes the same demands on novices as on experienced practitioners. The moment first-year teachers enter their first classrooms, they are held to the same standard – and subjected to the same procedure – as their more experienced colleagues. Most other professions build in a period of apprenticeship. No one would expect a prospective surgeon, straight from medical school, to take charge of a complex operation. Nor would a new architect be asked to design, single-handedly, a large office building. Yet the job of teaching for a novice is identical to that of a seasoned veteran (sometimes harder); and the procedures used to evaluate them are identical. (p. 5)*

In these other professions, novices work under the direct guidance of those experienced in the field, who take responsibility for nurturing and developing the talents of those who follow them (Bartell, 2005). Teachers, though, are often the subjects of blame for the perceived failings of society (Tickle, 2000).

To be permitted to enter the profession in public schools, teachers must become certificated, and a majority of states now require newly hired teachers to take part in formal induction programs. However, newly hired teachers often are given the most difficult teaching assignments and left to "sink or swim" without the type of help provided by most other professions (e.g. American Federation of Teachers, 2000; Darling-Hamilton, 1996; U.S. Department of Education, 1998; Bartell, 2005; Grossman & Thompson, 2004; ERIC Clearinghouse on Teacher Education, 1999). Rather than having a professional with them to help them in their first several months and years, new teachers typically rely on trial and error and learn how to teach largely as a result of learning from their own mistakes; the common view of teaching does not include

learning to teach while teaching (Wayne, Youngs, & Fleischman, 2005; Stigler & Hiebert, 1999). The beginning teacher faces performing several duties while at the same time trying to learn those duties (Wong & Wong, 2001).

This is all detrimental to the process of teaching and learning, ultimately affecting student achievement. Since students' learning is the ultimate goal of teaching (Stigler & Hiebert, 1999), students' learning should be the ultimate goal of effective teacher induction programs (Breaux & Wong, 2003), and the induction process should glean the maximum educational benefit for students (Tickle, 2000). Improving student learning, therefore, relies on improving teaching (Stigler & Hiebert, 1999), and the goal of having a systematically planned program teacher induction should be to help new teachers not just survive, but to succeed and thrive (Bartell, 2005). Improving teaching for those new to the profession is thus necessary to maximize students' learning, knowing that the integration period for new teachers is crucial.

Over the past few decades, there has been an increased focus on teacher accountability, and professional development has become more of a priority for schools. Many studies have been done in recent years showing that although it is possible for beginning teachers to become successful despite their inexperience, that is most often not the case; rather, they typically struggle quite a bit (e.g. Hebert & Worthy, 2001; ERIC Clearinghouse on Teacher Education, 1986). Research also shows that beginning teachers often struggle in their first few years due to a lack of usefulness of new teacher induction programs (U.S. Department of Education, 2000), even though the early years of a teacher's career are the most formative, in which they establish patterns and practices that form the bases for the rest of their careers (Bartell, 2005). Sound induction programs

are necessary, wherein new teachers are assessed and supported as they grow toward becoming expert classroom teachers (Berry, Hopkins-Thompson, & Hoke, 2002). Inexperience accounts for the bulk of new teachers' problems, whereas formal induction programs should provide the continuity and guidance needed for beginning teachers (ERIC Clearinghouse on Teacher Education, 1986).

Typically, veteran school personnel design and implement these induction programs. Therefore, there appears to be a disjunction between what veteran administrators and teachers design for new teacher inductions versus what new teachers really need. Furthermore, there is a disparate body of literature that exists regarding new teacher induction (Tickle, 2000). There is quite a difference between teacher orientation – one or two days and it is completed – and induction, which involves ongoing, systematic training and support lasting throughout the first few years of teaching (Breaux, 2003; Delisio, 2003).

Purpose of Study

The purpose of this study is to compare and contrast the professional needs as reported by nontenured, recently tenured, and veteran teachers from their perspective vs. the perspective of administrators.

Rationale

One of the hottest issues in education today is new teacher training (Breaux & Wong, 2003). Beginning teachers rarely make smooth transitions into teaching; thus, attrition rates among new teachers are often five times higher than among experienced teachers (U.S. Department of Education, 1998). It has been estimated that anywhere from 30-50% of new teachers leave the profession altogether within the first three to

seven years (e.g. Bartell, 2005; Breaux & Wong, 2003; Darling-Hammond, 1996 & 2003; Gibbs, 2005; Wong & Wong, 2001; Scherer, 2005). Although there are many reasons that this occurs, studies have identified several reasons (such as lack of support, disenchantment with teaching assignments, inadequate classroom management, mentoring support, working conditions, unclear expectations given to them, uncertainty about the profession, and high stress (e.g. Tickle, 2000; Breaux & Wong, 2003; Darling-Hamilton, 2003)) that could be eliminated or at least reduced significantly with effective induction programs. The entire induction experience has been paid less attention than the specifics of teacher induction components, such as mentoring (Bartell, 2005).

To increase new teacher retention, then, new teachers need to receive more support through various means, especially through induction programs and having effective mentors (Feiman-Nemser, 2003). The first years of teaching need to become "a phase in learning to teach and surround new teachers with a professional culture that supports teacher learning," and this includes not just short-term support, but striving to retain new teachers beyond the first few years of their careers (Feiman-Nemser, 2003). Well-designed mentoring programs, for example, have been proven to "raise retention rates for new teachers by improving their attitudes, feelings of efficacy, and instructional skills" (Darling-Hamilton, 2003). Having an expert mentor during the first year of teaching has been shown to improve both teacher retention and effectiveness (Darling-Hamilton, 1996).

In most professions, beginners have the opportunity and/or requirement to work closely with others in the workplace, becoming familiar with the job responsibilities, culture of the profession and workplace, tasks specific to the particular place of

employment, and many other important facets of the job. However, beginning teachers are usually assigned a classroom and are often left to fend for themselves, with little daily interaction during the time they spend directly with students. New teachers often indicate that they are merely trying to survive - not thrive - during their initial years in the classroom (Bartell, 2005). As Bartell (2005) further explains,

> *At one time it was assumed that teachers would become fully qualified to teach by virtue of what they had learned in their university preparation programs and that no further learning would be required. We now understand the complexity of teaching expertise as it develops over time and recognize that even well-prepared beginning teachers are still novices and have much to learn. (p. 21)*

Some studies have identified major factors that influence whether and when teachers leave the profession, two of which are preparation and mentoring support in the early years (Darling-Hamilton, 2003). Furthermore, the profession of teaching is constantly and continually changing, and more than ever, teachers are called on to be accountable not only for themselves, but also for the achievement of the students in their classes.

Thus, new teachers need support when beginning their careers. The nature of the teaching profession is that a first year teacher is expected to do everything that a veteran teacher does, often with the most difficult classes to teach, and they are left to fend for themselves (Darling-Hammond, 1996). Furthermore, the kind of help provided in other professions, such as internships and residencies, are not available in the teaching profession; as a result, as many as 30% of new teachers leave in the first few years, while others who stay in the profession learn how to cope rather than how to teach well

(Darling-Hammond, 1996). Well-planned teacher induction allows new teachers to be phased into the profession to learn to gradually assume the same responsibilities as veteran teachers (Bartell, 2005). Instead of expecting the same type of performance from new teachers without experience alone in the classroom, the profession of teaching is necessarily evolving into one where new teachers need to be given many more opportunities to become successful given the realities of having them teach students virtually alone on a daily basis. Although new teachers need this kind of support, most districts will continue to expect novices to teach without daily direct supervision, if for no other reason than fiscally.

Veteran teacher attrition is another phenomenon that makes it important for new teachers to be ready to teach from the start. In Pennsylvania, there have been many incentives in recent years for teachers to retire. For example, the percentage that retired teachers will get for their pensions was increased in the early 2000s by 25%. Thus, some experts have predicted that in the next few years, there may actually be a shortage of qualified teachers in Pennsylvania as a result. If this happens, the number of inexperienced teachers will dramatically increase. The quality of new teacher induction will therefore become even more important than it is currently, and it will be important for new teachers that their first experiences are ones that will be helpful to them for a long career. At stake is the quality of instruction for generations of students to come, particularly since many states have recently adopted the practice of hiring uncertified teachers with little prior training (Darling-Hammond, 2000). Also at stake is the quality of our nation's teaching force (U.S. Department of Education, 2000).

Even when induction programs are implemented, there are gaps between what the new teachers in the programs and those implementing the induction think are the most important (Darling-Hammond, 1996). New teacher induction programs are typically designed and implemented by veteran teachers and school administrators, and they often focus on the shortcomings of new teachers, based on their present or past experiences (ERIC Clearinghouse on Teacher Education, 1986). However, when one reaches the level of expertise necessary to be involved in creating a new teacher induction program, it is possible that what veteran school personnel feel is important for new teachers to know differs from what new teachers perceive that they need. Knowing which aspects of new teacher induction programs that both of these groups feel is important would help when improving existing induction programs and developing new ones. Educational reform efforts need to be infused with new teachers who are not only motivated but also well prepared (Anyon, 1997). Much professional development offered to all teachers is substantially lacking, however, in meeting some of the challenges of recent educational reform initiatives (Birman, et al., 2000).

Many states other than Pennsylvania have successful induction programs, although improvement of them could help new teachers even more. (For some examples of successful new teacher induction programs, refer to Appendix A.) Although some new teacher induction programs report much success, these types of programs are few and far between nationally. Therefore, first year teachers need more - or a different kind of - support than they typically get. If new teacher induction programs were improved, then beginning teachers would have a better chance at having success, and they would have a built-in support system.

The No Child Left Behind Act of 2001 (NCLB) raised the expectations of public education. One of the requirements of NCLB is that by the year 2014, all students will be expected to become at least proficient in reading and mathematics, and each state in the United States is required to devise an assessment system to measure whether or not students are achieving proficiency. The state of Pennsylvania developed the Pennsylvania System of State Assessment (PSSA) to meet this requirement. Teachers that are new to the profession are therefore going to need even more support and knowledge than ever before, since the stakes have been raised. Research has shown a direct correlation between the measures of teacher preparation and certification and student achievement in reading and mathematics (Darling-Hamilton, 2000). An overview of accountability and the impact on teachers, particularly new teachers, follows.

High Stakes Tests and Teacher Accountability

Even before the NCLB Act was enacted, The National Commission on Teaching and America's Future had begun advocating redesigning schools to support high-quality teaching and learning (Darling-Hamilton, 1996), which begs the question as to what constitutes "high-quality" teaching and learning, which will be discussed later. An essential belief of the National PTA is that improving teacher quality is a key element of effective school reform (National PTA, 2003). In 1971, more than half of teachers in the United States had fewer than ten years of experience; by 2001, this cohort was approaching retirement (Moore Johnson & Kardos, 2005). For the first time in three decades, the proportion of new teachers has been growing (Moore Johnson & Kardos, 2005), but this newest group of teachers is also the first to enter teaching with the level of high-stakes testing and accountability that exists today. Furthermore, when teachers

retire, all that they have learned is usually lost to the profession; teaching persists while teachers come and go (Stigler & Hiebert, 1999).

Since NCLB has been enacted, individual school districts and school buildings have struggled with complying with the mandate that all children will become at least proficient in reading and mathematics. Although leeway has been added to let student growth towards this goal be an adequate measure, there nevertheless have been many districts that still have been put on various warning lists as mandates by NCLB, including some instances of private agencies or state departments of education taking over districts. In many cases, the schools are reconfigured, staffs are furloughed, or buildings are closed. Therefore, new teachers face a new struggle that has never before been part of public education – high stakes accountability. This accountability manifests itself in tension between teachers needing to learn more and become better at what they do, while being expected to perform to the highest standards possible (Tickle, 2000). New teachers can no longer suffer from myopia, focusing only on their own competency as teachers and the immediacy of classroom management without envisioning the larger picture (Grossman & Thompson, 2004). The enculturation of new teachers into this phase of accountability must begin with strong teacher induction programs (Wong & Wong, 2001).

The type of educational reform that needs to take place in order to attempt to meet NCLB mandates requires that the culture of teaching must begin to change (Wong & Wong, 2001); the necessary first step is that new teachers must be a large part of this educational cultural change. Wong & Wong (2001) further state that

> *Schools and school districts that have as their priority the training and improvement of their teachers will have improved student achievement…recruiting, preparing, and retaining good teachers is the central strategy for improving our schools. (p. 6)*

Beginning teachers have certain qualities coming into the profession, but those that can stay in the profession always seek new ideas, are flexible, are always seeking new ways to help all children learn, and continue to grow professionally throughout their careers (Bartell, 2005).

The profession of teaching has become increasingly demanding for decades, arguably beginning to escalate after the United States federal government was embarrassed in 1959 with the launch of the Russian satellite Sputnik. Since then, there has been an increased focus on holding teachers accountable for the knowledge base of citizens in society, and this has been manifested in more difficult criteria for teachers to become certified, more accountability for student learning, increased focus on professional development, increased demand for teachers to continue being educated themselves throughout their career, and a variety of other demands that are different in many ways than any other profession.

In addition to this type of accountability, beginning teachers are expected to have the same amount of accountability from the beginning of their careers as veteran teachers with decades of teaching experience are expected to have. This is the case despite the first year of teaching having long-term implications for future teacher effectiveness, job satisfaction, and career length; many begin this transition finding their jobs much more challenging than anticipated, making many new teachers rethink their career choice

(Hebert & Worthy, 2001). Beginning teachers are thrust into their careers with many of the aforementioned difficulties, as well as some others:

- intensive knowledge of subject matter
- knowing how to plan standards-based units and lessons
- knowing how to continuously assess student progress
- being able to accommodate individual, language, cultural differences, and other diversity among students in the same class, as well as dealing with complex social contexts and situations
- learning school and district policies
- figuring out the basics of classroom management
- being able to fit in the school organization in which they find themselves
- often having difficult classroom assignments
- coping with having little formal socialization into the district
- having to cope alone, even if possibly having personal characteristics inhibiting them from becoming successful teachers
- having little transition opportunity from student teaching to the first job opportunity

(Berry, Hopkins-Thompson, & Hoke, 2002; Hebert & Worthy, 2001; Lasley, 2004)

Teachers are expected to be experts at their craft much more than ever before. The advent of high-stakes testing has increased the focus on teacher quality and accountability. Teachers are being evaluated and assessed, and much of the process is done to further the dialogue about what is considered good teaching practice (Assessment

and Standards Development Services, 2001). Since teaching is a service profession (Wong & Wong, 2001), and most of the people it services are children, it is important that beginning teachers be given every bit of help and guidance that they need to become caring, effective instructors who give children the best opportunity to learn in the best ways possible. Effective instructors use proven research-based practices that have been used by other successful teachers (Wong & Wong, 2001). By strengthening collegiate teacher education, new teachers will start to become higher quality instructors (American Federation of Teachers, 2000) and will bring stability and coherence to the classroom. What, then, constitutes quality teaching and quality teachers?

"Quality" Teaching, "Quality" Teachers, and New Teacher Induction

New teacher induction is defined in many ways, among them a definition from Breaux & Wong (2003):

> *Induction is a structured training program that must begin before the first day of school and continue for two or more years. It has these basic purposes:*
>
> 1. *To provide instruction in classroom management and effective teaching techniques*
> 2. *To reduce the difficulty of the transition into teaching*
> 3. *To maximize the retention rate of* ***highly qualified teachers***
>
> [emphasis mine] *(p. 5)*

The concept of teacher quality has become more important in educational discussion and discourse in recent years. The No Child Left Behind (NCLB) Act of 2001 uses this term frequently; a highly qualified teacher, according to the U. S. Department of Education, is fully certified, has a bachelor's degree and has completed a content area

major OR has passed a content area test in the subject he/she is assigned to teach. In Pennsylvania, a fully certified teacher must have a bachelor's degree, a content area major and have passed a content area test. In addition, fully certified teachers in Pennsylvania have completed pedagogical course work in education, including student teaching (Pennsylvania Department of Education, 2003). The National Commission on Teaching and America's Future has determined that redesigning schools to support high-quality teaching and learning is an essential component for restructuring the teaching profession (Darling-Hamilton, 1996). However, although the teacher requirements of NCLB are pushing states and districts to develop needed policies and systems, implementation is proceeding slowly; most states are struggling to define what "highly qualified" means for teachers currently in the classroom and to develop and fund systems to count and track these teachers (Center on Education Policy, 2004). "Highly qualified" for teachers typically relates to teachers' impact on student achievement (Lasley, 2004; Scherer, 2005). As the Center on Education Policy (2004) iterates,

> *Although the teacher requirements of NCLB are pushing states and districts to develop needed policies and systems, implementation is proceeding slowly. States are struggling, for example, to define what "highly qualified" means for teachers currently in the classroom and to develop and fund systems to count and track these teachers. (p. 2)*

The NCLB Act requires that all public school teachers must be highly qualified, meaning they must be fully licensed and certified by state law (National PTA, 2003). However, varied definitions by state of "highly qualified" teachers make it difficult to determine how professional development and new teacher induction should be structured

(Lasley, 2004). High-quality teaching and expert practice, though, can be the developmental keystones of effective induction programs for new teachers (Bartell, 2005).

Those who plan and deliver induction programs must realize that high quality teaching is an adjunct and extension of strong academic preparation (Bartell, 2005), not a substitute for same. Thus, high quality teaching involves many aspects that differ from state to state and from school district to school district. However, there are many common threads that can be found despite these differences. For example, the most effective induction programs are evolving from helping teachers merely survive to moving teachers along the continuum of teacher development to expert practice and high quality teaching and learning (Bartell, 2005).

State induction programs tied to high-quality preparation are the most effective types (Darling-Hamilton, 2003). According to Breaux & Wong (2003), there have been at least two hundred studies showing that the only factor that can increase student achievement is a knowledgeable, skillful teacher. Teacher preparation programs are largely responsible for teaching the knowledge (subject area as well as pedagogy) that new teachers need, but how does a novice teacher obtain the necessary skills to help students raise their achievement? One resource suggests that high quality teachers are persistent and are problem solvers, are protective of learners and learning, translate theory and research into practice, use successful approaches for at-risk students, understand and anticipate burnout, and are willing to make mistakes (U.S. Department of Education, 2004). The National Commission on Teaching and America's Future has a goal that "…by the year 2006, America will provide all students with what should be

their educational birthright: access to competent, caring, and qualified teachers" (Darling-Hamilton, 1996). Among their six goals for the year 2006, the last consists of the statement, "**High-quality teaching** will be the central investment of schools" [emphasis mine] (Darling-Hamilton, 1996). These concepts are not quantitatively measurable, which means that much of what school administrators rely upon to determine whether or not a teacher is striving for these qualities is anecdotal formal and informal observations. In the case of novice teachers, the amount of time spent to determine whether or not these and other qualities are occurring is often not able to happen without other means that will be discussed later when dealing with elements of induction.

Role of Professional Development

There are clearly differing ideas for what constitutes quality teaching and teachers, but unmistakably, one aspect that has a direct impact on both novice and veteran teachers is professional development. Here, however, there are a myriad of differing ideas for how a school district approaches professional development. Sometimes, districts attempt to focus on overall instructional expertise, while other times they attempt to focus on particular characteristics of curriculum and instructional approaches (Odden & Archibald, 2001). Professional development programs that are long-term, school-based, collaborative, focused on students' learning, and linked to curricula yield the best results, according to Hiebert, Gallimore, and Stigler in *Education Researcher* (as cited in Breaux & Wong, 2003). However a district decides to approach professional development throughout a school year, there is another important decision that needs to be made – do the new teachers participate in the exact same professional development activities as veteran teachers, or do they have separate professional development, or a

combination? Furthermore, for the new teachers, if there are separate activities, are there activities for all nontenured teachers, or are there activities specific to the level of experience? Since the answers to questions such as these require individual school districts across the country to have these discussions, it is important to have baseline data to make strong, intellectual decisions in these matters. Hence, the importance of the purpose of this study is again corroborated.

These questions about professional development require much thought, discussion, and discourse between and among educators within school districts to develop programs that ultimately will help all teachers in the most effective ways possible. There are some aspects of this, related to what novice teachers would receive during induction, that are reflective in the latter questions. Some educational experts have identified three structural features of all professional development: form (i.e. type of activity, format of activities and/or workshops, etc.); duration (hours, span of time, etc.); and participation (i.e. how teachers are grouped, who participates on what level, etc.) (Birman, Desimone, Porter, & Garet, 2000). There also were three core features characterizing effective professional development experiences: content focus, active learning, and coherence (Birman, Desimone, Porter, & Garet, 2000). The new model of teaching requires that like other professions, teachers must work together, novices and veterans, to address the learning of students, learning from one another, and solving problems collaboratively (Bartell, 2005). New teacher induction is the first step in staff development, and it is a bridge for beginning teachers to become successful with the background, ability, and personal characteristics to become good teachers (ERIC Clearinghouse on Teacher Education, 1986).

Professional development is an essential component in developing professional learning communities. To optimize its effectiveness, professional development programs need to consist of more than one-shot workshops; they need to enable teachers to engage in meaningful dialogue and work with their colleagues to constantly and continuously strengthen their knowledge and skills for the complex challenges of teaching (Danielson, 2002). This may consist of many activities, among them but not limited to mentoring, serving on educational committees, analyzing and assessing student work, action research, collaborative work, and reflective ongoing conversation (Danielson, 2002). Although professional development now happens several times throughout the school year for all districts in Pennsylvania, initial offerings are generally not sustainable unless sustainability is built into the offerings. Internal and external sources of new ideas can enhance professional development programs, and this will help to develop a culture of professional inquiry that presumes high quality teaching skills and will perhaps energize all teachers to learn new teaching techniques (Danielson, 2002).

As has been presented here, teaching as a profession is unique from other professional occupations for a number of reasons, one of which is that new teachers are expected to become good at their craft while doing so largely alone with minimal direct supervision. This is not to suggest, however, that all new teachers begin their professions at a deficit; new teachers, in fact, bring much enthusiasm to the table, and they bring much fresh ideology into the classroom. Beginning teachers are by and large eager to begin their careers, looking to the minimal supervision often as an opportunity rather than as a deficit, much like the teenager who first obtains a driver's license and operates a vehicle alone for the first time. New teachers should be seen as resources of intellectual

capability and eagerness, able to transform education in a positive way and to meet its unforeseen challenges (Tickle, 2000). Scherer (2005) asks how we can harness the energy and enthusiasm that new educators invariably bring to the classroom. Teaching must evolve into more of a consultative practice (Bartell, 2005) than it has ever before been, and beginning with the induction of new teachers is the best place to begin this process.

Elements of New Teacher Induction

> *A common metaphor used to describe the [teacher] induction stage is that of a bridge. The induction period provides that a* (sic) *crucial link between formal preparation and expert practice. However, traversing that bridge is not always a simple matter. (Bartell, 2005, p. 33)*

The latter metaphor, along with the previous definition of teacher induction from Breaux & Wong, implies that new teacher induction is defined by those already in the education profession. Bartell (2005) defines the induction period as the time in which a novice teacher becomes more familiar with job responsibilities, work settings, and professional norms and expectations (p. 5) and as a systematic, organized plan for support and development of new teachers in the initial three years of service (p. 6). However, Tickle (2000) offers a definition from the perspective of new teachers, which corroborates the aforementioned problem statement that there may be a disjunction between what new teachers perceive as their primary needs versus those needs seen as paramount by veteran educators:

> *…from the perspective of new teachers, induction is a local and personal problem of school-based acculturation and assessment of performance, combined*

with the infusion of new blood capable of bringing about change. That is, it means being assimilated into the existing conditions and milieux of schools, which might clash with the identities, ideals and ambitions as members of the new graduate force in education (p. 7).

New teachers are not the only beneficiaries of effective induction programs that nurture them into the profession; having novice teachers develop into quality teachers also benefits all in the educational system, especially students, other teachers, and school administrators (Wong & Wong, 2001). Induction can and should be embraced as a process of educating teachers in the acquisition and use of diverse but complementary kinds of knowledge, and ways of coming to know (Tickle, 2000), or even a more philosophical approach that asks how we know what we know.

A structured induction program focused on instructional skill helps to maximize student learning and achievement (Danielson, 2002). Pupils can receive maximum educational benefits from effective teacher induction, since they benefit from the quality of teachers who become masters at their craft (Tickle, 2000). Teaching and learning as pedagogical entities are being studied, analyzed, and scrutinized more now in the information age than ever before. Teachers, particularly those beginning in the profession, must become masters of their craft for students to learn at their maximum potentials. Effective teachers practice a variety of approaches until they develop mastery that helps students achieve to their highest abilities (Sergiovanni & Starratt, 1998). Hence, veteran teachers, as well as novices, need to constantly and continually study pedagogical issues and strategies throughout their careers; beginning teachers need more help at the start now more than ever before.

Although it was stated earlier that studies about new teacher induction show that there is a disparate body of literature that exists regarding new teacher induction (Tickle, 2000), there are several resources authored in the last decade that outline strategies for new teachers, as well as veteran teachers, to improve their craft. For example, Danielson divides teaching into 22 components clustered into four domains – planning and preparation, classroom environment, instruction, and professional responsibilities (Danielson, 1996, p. 3; Danielson & McGreal, p. 53). Within these domains lie many other themes such as equity, cultural sensitivity, high expectations, developmental appropriateness, accommodating students with special needs, appropriate use of technology, etc. (Danielson, 1996). Since this is but one example of the vast amount of interconnected pieces of knowledge that encompass the profession of teaching, it is a task in and of itself to identify the major themes that are common among most of these resources. To do this, some of these resources must be first examined and analyzed for content.

Danielson (2002) also has posited that transforming schools into learning centers for educators and community members is necessary to improve schools and enhance student achievement (p. 9). She describes some strategies that can help accomplish this, among them: professional development enabling teachers to engage in meaningful work with colleagues to strengthen knowledge and skills; having a culture of professional inquiry in teacher activities, teacher attitudes toward one another, and in teacher work; and having teachers observe one another (p. 9). Collaboration is again mentioned as a necessary ingredient in teacher improvement for veterans and novices, as well as chances for teachers to observe one another. Collaboration is an essential theme mentioned often

by Danielson in her books, as are the themes of reflection on practice, self-assessment, and self-directed inquiry, and cultivating a community of learners among teachers (Danielson & McGreal, 2000). Danielson & McGreal also posit that requiring new teachers to keep journals and develop portfolios for new teacher evaluation as good strategies for helping new teachers (pp. 93-94).

Sergiovanni & Starratt (1998) define standards for authentic pedagogy in terms of the students' interaction with the information at different intellectual levels – higher-order thinking (students produce new meaning and understanding by manipulating information and ideas); deep knowledge (thoroughness of instruction produces complex understanding); substantive conversation (builds improved and shared understanding); and connections to the world beyond the classroom (p. 105). These standards all refer to one strand of one strategy that new teachers need to learn to develop, although it takes some time and practice to master – getting students to use higher-order thinking and learning skills, which encompasses several strategies such as using higher-order questioning techniques.

Moore Johnson & Kardos (2005, May) believe that bringing veteran and novice teachers together should be a priority for building principals, since there are differences in their goals and expectations (p. 8). They outline many strategies for accomplishing this, which aligns with the earlier statement that there appears to be a disjunct between what nontenured teachers, recently tenured teachers, veteran teachers, and school administrators believe is important in new teacher induction: treat the hiring process as the first step of induction, assign new teachers to work alongside experienced teachers, schedule time for new and veteran teachers to meet, provide more than one-to-one

mentoring, develop school-based induction programs led by experienced teachers, organize ongoing professional development on the curriculum, and encourage teacher leadership and differentiated roles (pp. 11-13). There is an obvious theme here of using veteran teachers to help in the development of new teachers, and this is a common theme throughout recent literature regarding helping new teachers begin their careers. Shank (2005, May) adds that common workspace, common planning time, and common tasks as the most valued means of support cited by new teachers in a high school that she studied (p. 17).

Stigler & Hiebert (1999) name six principles for gradual, measurable improvement to improve all teaching: expect improvement to be continual, gradual, and incremental; maintain a constant focus on student learning goals; focus on teaching, not teachers; make improvements in context; make improvement the work of teachers; and build a system that can learn from its own experience (pp. 131-136). The common theme among these principles is that of constant improvement by all educators, and although these six items in and of themselves could be the basis for a book (which is beyond the scope of this discussion), a there are connections to new teacher induction. Certainly, the first five of these principles have a direct correlation to the experience of beginning teachers, who should expect improvement to be constant, yet gradual, focusing on students and their needs more than teachers and their needs. Building s system that can learn from its own experience is more of the work of school administrators and school board members. Stigler & Hiebert (1999) follow up these principles, though, corroborating much of what Moore Johnson & Kardos and Shank stated – time for teachers to collaborate during the workweek is essential, and having teachers work

individually and collaboratively to improve teaching is a necessary investment to improve teaching and learning (pp. 144-145).

Breaux (2003) has developed an extensive list of teaching tips for new teachers to utilize along with their mentors, and these are clustered into six categories: classroom management, planning, instruction, professionalism, motivation and rapport, and a teacher's influence (pp. vii-ix). Classroom management, planning, and motivation and rapport are three essential aspects of teaching, and there are many items listed by Breaux that are useful for new as well as veteran teachers, dealing primarily with the management of teaching duties. On a deeper intellectual level, instruction and professionalism consist of many of the already mentioned concepts by other authors (i.e. observing other teachers, focusing on students' strengths, challenging students to think critically, asking for assistance, setting goals for improvement, etc.), as well as some subtler items that still are related to many of the previously mentioned items (i.e. learning to recover quickly, making learning fun, learning and growing from mistakes, etc.) (Breaux, 2003; Delisio, 2003). Breaux also discusses the philosophical approaches connected with teaching, namely discussing a teacher's influence, especially on students. This is connected to the idea of teaching as a profession, which is another important aspect already mentioned necessary for quality teacher induction programs.

Although new teachers typically go to the classroom directly from having courses on the methodology of teaching, there are nevertheless some of these methodological items that are usually found in teacher induction programs. For example, Bartell (2005) mentions that professional practice preparation is framed primarily into three categories: knowledge about learners and learning, knowledge about curriculum and teaching, and

knowledge about contexts and foundations of education (p. 6). Knowing the details of prospective teachers' knowledge, pre-teaching experiences, capabilities, and fit for a particular teaching position is another important aspect of the process (Tickle, 2000). The challenge, however, as any experienced teacher knows, is to translate this knowledge base into actual practice with students having diverse needs and learning styles – transforming knowledge into practice. However, well-designed induction programs should not be a substitute for strong academic preparation, but an adjunct to and extension of that preparation (Bartell, 2005); the strong academic preparation is but one important component that is a prerequisite for those entering the profession of teaching.

Bartell (2005) also discusses teacher collaboration as an important aspect of improving teaching and learning (p. 11), which is clearly a topic that is almost universal among researchers and authors as one essential to improving the teaching and learning process. She views the important aspects in new teacher induction programs in seven categories: procedural, managerial, psychological, instructional, professional, cultural, and political (p. 17). Bartell (2005) also states that the induction process can also be used to identify those individuals who perhaps are best suited to pursue other professions:

> *Those who plan and deliver induction programs need to consider that not all new teachers will remain as active professionals. In fact, systematic attention to these entry years in an induction program may also help identify individuals who are not well suited for the profession early in their careers, so that they can be encouraged to pursue other career options. It is much better to remove those teachers from the classroom early in their careers rather than to let them continue year after year (p. 15).*

That new teacher induction unfolds in progressive stages is also a theory held by many (e.g. Breaux & Wong, 2003; ERIC Clearinghouse on Teacher Education, 1986), as well as collaboration being essential (Breaux & Wong, 2003). According to Breaux & Wong, the purposes of induction are to ease the transition into teaching, improve teacher effectiveness through training, promoting a district's culture, and maximizing the retention rate of teachers (p. 14), and must consist of training, support, and retention (p. 36). Other components of successful induction programs are that they: start at least four days before school begins, offer a continuum of professional development, provide teacher study groups, incorporate administrative support, integrate mentoring, provide structures for modeling effective teaching, and provide opportunities to visit other classrooms (Breaux & Wong, 2003). Many of these principles incorporate facets of new teacher induction that corroborate many aforementioned strategies and necessities; it will, therefore, be important to determine which of these facets are the most and least necessary, according to different groups of educators.

Besides new teacher induction programs consisting of progressive stages of achievement, other characteristics are equally important, for example: the induction program justifies its own importance; the program cultivates mutual support; long-term goals are addressed; teacher expectations and norms of conduct are clearly delineated; and the program is tightly organized, consistent, and continuous (ERIC Clearinghouse on Teacher Education, 1986). As with many other induction items, many of these items address the "intangibles" of teaching, i.e. what prospective teachers already know when entering the profession. According to this same article, the most prevalent components of

existing new teacher induction programs are internship status, mentors, induction committees, and orientation seminars (ERIC Clearinghouse on teacher Education, 1986).

Tickle (2000) approaches the concept of teacher induction from a teacher-centered perspective, but he also lays a foundation of several criteria necessary for this to help turn novice teachers into masters of their craft, as well as raising the levels of expectations for new and veteran teachers. For example, he mentions the importance of identifying the type and nature of professional knowledge required of prospective teachers, including the kinds of persons they should be or be willing to become (Tickle, 2000). Tickle (2000) also discusses the importance of the very routines and functions of being a teacher, along with aspects of professional knowledge, knowledge of specific subject matter, classroom management, pedagogical skills, the working context of the school, curriculum, and assessment, to name a few (p. 29).

Berry, Hopkins-Thompson, & Hoke name several essential components of effective teacher induction programs: opportunities for novice teachers to observe and analyze good teaching, assist novices in transferring knowledge necessary to improve student learning, ongoing guidance for new teachers, reducing work loads for beginning teachers, having rigorous evaluations of the program itself, cultivating a network of new and experienced teachers, and focusing on collaboration (pp. 2, 7, 13). All those who have studied and written about new teacher induction have categories such as these, and there are several items that are essentially the same in content, but with different names. There are just as many items that vary in terms of degree among the authors and researchers, but there are not very many items that only a few people think are important for new teacher induction and others do not. However, some categorization will be

needed to organize the vast number of items that are important and essential to new teacher induction programs. A further analysis and synthesis of these items will be necessary when discussing methodology.

Many other researchers and authors have weighed in on this important process of including important items, criteria, and professional development topics in new teacher induction programs:

- In the first year of employment, four factors have been identified as impacting the success of novice teachers: a match between expectations, personality, and workplace realities; evidence of impact; and using successful strategies to manage student behavior and enter the culture of the school, and taking an active role in one's own induction (Hebert & Worthy, 2001).
- General academic ability and intelligence, subject matter knowledge, and knowledge of teaching and learning have been named as important criteria of prospective new teachers for schools to investigate (Darling-Hammond, 2000).
- Moral development of teachers is becoming increasingly important, and thus should be included in the development of new teachers, especially regarding moral autonomy, moral agency, critical self-reflection, self-justification, productive self-criticism, collaboration, and community (Sockett & LePage, 2002).
- The Peer Assistance and Review Program in place in Columbus, Ohio, requires teacher consultants of interns to: demonstrate good teaching practices, observe interns' teacher practices, and conference with and assist other interns; plan and present new-teacher orientations; and conduct workshops on areas such as classroom management, cooperative learning, parent conferencing, etc. (U.S. Department of Education, 1998).

• Feiman-Nemser (2003) suggests that some of the most important things new teachers need to learn as quickly as possible are: learning how to "think on their feet" (i.e. be able to spontaneously react to unexpected situations), making quick decisions, studying the effects of their practice, and learn how to learn desirable lessons from their early teaching experiences. These are some of what may be considered as "intangibles" for new teachers to learn – that is, talents and teaching capabilities that new teachers already inherently have when beginning in the profession, and which need nurtured and cultivated throughout the early years of their careers. Feiman-Nemser (2003) further believes that new teachers crave some things at the beginning of their careers, such as opportunities to learn from veteran teachers, being able to discuss curriculum, learn how to address specific students' needs, and gain insight from other teachers regarding subject matter.

• Even the two national teacher unions – the National Education Association (NEA) and the American Federation of Teachers (AFT) – identify new teacher induction as an essential component of teacher preparation. Regardless of how many years of university studies have been completed, the AFT (2000) believes that all beginning teachers must complete teacher induction programs, and that mentors need to be a required component of this (p. 10). The mentors need to be elected and trained properly, as well as given ample time to teach, support, and evaluate new teachers (American Federation of Teachers, 2000).

The NEA (2002) also has clear expectations for what should be included in the support system for new teachers: the program must be designed, established, and funded by the district, overseen by a committee, available to all new teachers, mentor-based,

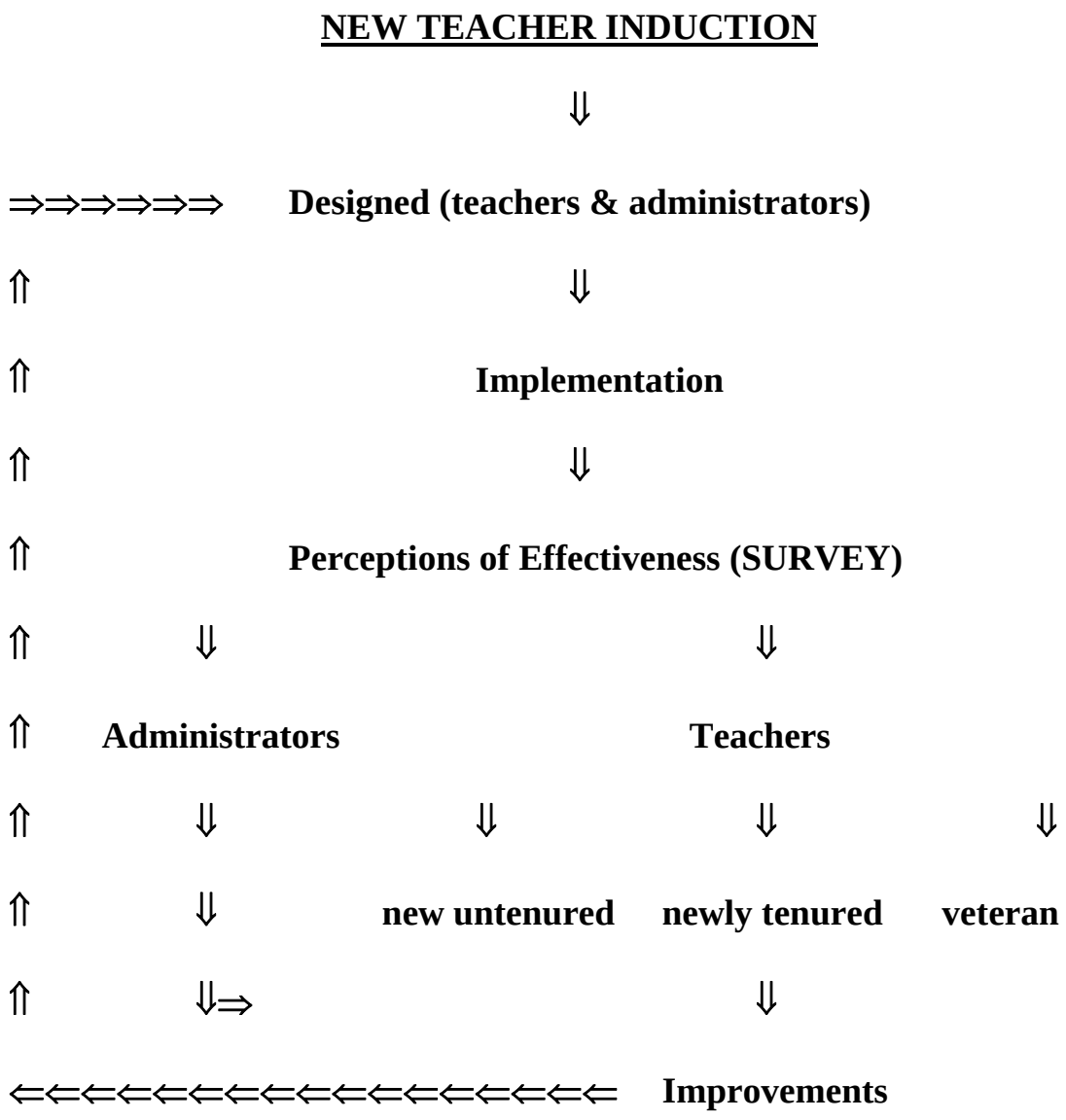
introduced with a new teacher orientation, mindful of new teacher assignments, supportive of collaborative learning, rich with professional development, and helpful to administrators (p. 6).

Conclusions Gleaned From the Literature

Despite the large number of topics that have been and are used in new teacher induction, there are quite a few topics that appear most often in the various literature and studies that have been done. Furthermore, there are several general categories of topics in new teacher induction programs that can be gleaned from the overview of the literature on the topic. A useful place to begin determining new teacher induction categories is from Bartell (2005), who delineates seven new teacher induction categories as previously mentioned (procedural, managerial, psychological, instructional, professional, cultural, and political); more detail will be provided when building the survey.

Thus, there may be a disjunction between those that create new teacher induction programs and what new teachers perceive as being what they need during their first important days and months in their teaching careers. Furthermore, there may be a disjunction among those groups of teachers and administrators that create new teacher induction programs. The purpose of this study is to further study what different educational stakeholders (new untenured teachers, newly tenured teachers, veteran teachers, and school administrators) each think is effective in new teacher induction, and what the similarities and differences are among these groups' opinions. Figure I on the next page represents a visual framework map for the flow of how this study is meant to help improve new teacher induction programs.

FIGURE 1: FRAMEWORK MAP



Chapter II OVERVIEW OF THE STUDY

To proceed with this study, the parameters of the study had to be delineated so that the study would be feasible, valid, and glean meaningful conclusions based upon the focus of the study. To that end, the overview presented in this chapter states the problem, defines the research questions and the terms used in the study, describes the research site and sample, and discusses the data collection and analysis. The contribution this study has been intended to make to educational theory and practice is stated, and the process for building a survey to be used for this research is described in detail. Once this overview of the study was completed, it was clear how the process would then proceed and how the data that was gathered would be useful to answer the focused research questions.

Problem Statement:

What do different educational stakeholders (new untenured teachers, newly tenured teachers, veteran teachers, and school administrators) each think is important in new teacher induction, and what are the similarities and differences among these groups' opinions?

Research Questions:

♦ What aspects of new teacher induction do new untenured teachers think are most important?

♦ What aspects of new teacher induction do recently tenured teachers think are most important?

♦ What aspects of new teacher induction do veteran teachers think are most important?

♦ What aspects of new teacher induction do school administrators think are most important?

♦ What similarities exist between and among what these varied groups of educators think are most important in new teacher induction?

♦ What differences exist between and among what these varied groups of educators think are most important in new teacher induction?

♦ Why do these similarities and differences exist?

Definition of Terms

The following terms are defined based either upon the state of Pennsylvania interpretation (i.e. "tenured teacher"), by definition according to the literature (i.e. "demonstration classrooms"), or for purposes of this research (i.e. "veteran teacher"):

• Demonstration Classrooms: Demonstration classrooms are classrooms of a school district's most successful veteran teachers, opened to new teachers during the initial instruction week, or opened throughout the school year to provide opportunities for new teachers to observe successful veteran teachers in action (Breaux & Wong, 2003).

• Experienced Teacher: An experienced teacher is defined as a tenured teacher (see definition of "untenured teacher") with at least three but less than ten years of consecutive teaching experience.

• Induction: Induction is the process of systematically training and supporting new teachers, commencing before the first day of school with students and continuing for a period of years (Breaux & Wong, 2003).

• Moral Autonomy: Moral autonomy encompasses a variety of concepts, but primarily means teachers trying to understand and sophisticate their moral perspectives and developing individual autonomy and voice (Sockett & LePage, 2001). This definition was crafted as a result of research of a group of teachers who worked in a context, which expected strict adherence to rules and engendered a fear of authority (Sockett & LePage, 2001).

• New Teacher: A new teacher is defined as a teacher in the first three years of his or her teaching career.

• Recently Tenured Teacher: A recently tenured teacher is defined as a tenured teacher (see the definition of "tenured teacher") with less than ten years of teaching experience.

• Teacher Quality: The No Child Left Behind Act (NCLB) mandates that all public school teachers with primary responsibility for direct instruction in one or more of NCLB's core content areas are required to demonstrate that they satisfy the definition of a "Highly Qualified Teacher." The Pennsylvania Department of Education mandates that to satisfy the definition of a "Highly Qualified Teacher," teachers must:

1) Hold at least a bachelor's degree;

2) Hold a valid Pennsylvania teaching certificate (i.e., Instructional I, Instructional II or Intern certificate but not an emergency permit); and

3) Demonstrate subject matter competency for the core content area they teach.

In Pennsylvania, the NCLB core content areas include English, Reading/Language Arts, Mathematics, Sciences, Foreign Languages, Music and Art, and Social Studies (history, economics, geography, and civics and government).

• Tenured Teacher: See the definition of "Untenured Teacher."

• Untenured Teacher: Upon receiving a valid first teaching certification in Pennsylvania, a teacher is considered to be untenured. The initial certification is categorized as "Instructional I" as long as a teacher remains untenured. Upon being hired as a regular classroom teacher (not a daily substitute teacher), the untenured teacher must be formally evaluated by a qualified school administrator at least twice annually. After receiving six satisfactory semi-annual employee evaluations of the teacher's performance and completing 24 credits of college coursework during the teacher's first six years of teaching, the teacher becomes eligible for an Instructional II certification, which then signifies that the teacher is then tenured.

• Veteran Teacher: A veteran teacher is defined as a tenured teacher (see definition of "untenured teacher") with at least seven years of teaching experience.

Research Site

There are currently 501 public school districts in Pennsylvania, approximately one-seventh of which are in Southwestern Pennsylvania. (There are forty-three public school districts in Allegheny County, which includes Pittsburgh and its suburbs. There are fourteen public school districts in Washington County, while there are seventeen in Westmoreland County.) Permission was asked of all superintendents of the school districts in Allegheny, Washington, and Westmoreland Counties to disseminate the survey to their professional staff (the specific process to be further detailed in the discussion of the sample later in this study).

Broadly speaking, the school districts of Southwestern Pennsylvania are probably as diverse a group as exists in the entire nation. There are several districts that are financially or academically impoverished (or both), and there are many districts that are

flourishing with population spurts and increasing revenue. The student enrollment ranges from about 750 to 34,650 students, and the average number of students per teacher ranges anywhere from about 10 to 20. (A more detailed demographic description is given in Appendix B.) Furthermore, all school districts in Pennsylvania have the autonomy to have their individual curricula approved by their local school boards, so there is little, if any, similarity across the board from one district to another academically. However, the recent state assessment exams – the PSSAs -were implemented to attempt to standardize the mathematics and literacy curricula in individual districts.

Math and reading are the only two tests that count towards a school's Adequate Yearly Progress (AYP) status. Students in grades 3-8 and 11 are all tested in math and reading – previously, only grades 3, 5, 8 and 11 were tested in these subjects. The grades were expanded to 3-8 to comply with No Child Left Behind (NCLB) requirements. The 2006 AYP school and district calculations will be based on PSSA results for grades 3, 5, 8 and 11 only. The newly added grades 4, 6 and 7 were reported to the districts and schools, but was not a part of their AYP calculations until 2007. NCLB permits states to delay using assessment data (such as these newly added grades) until multiple years of data exist if the state uses a multiple year averaging procedure, such as is done in Pennsylvania. The writing PSSA is administered to grades 5, 8 and 11 about a month earlier than the reading and math tests. There are no plans to implement any new subject assessments or expansion of grades tested without any new requirements from the US Department of Education (Pennsylvania Department of Education, 2006).

The public school districts in Allegheny, Washington, and Westmoreland Counties are a representative sample of schools in Pennsylvania. Fifty-six percent (56%)

of the districts in Allegheny County made AYP in 2004-2005, while 50% in Washington County and 47% in Westmoreland County made AYP. Combined, 53% of the districts in these three counties made AYP for 2004-2005. Comparatively, 62% of the district in the state of Pennsylvania made AYP for the same reported school year. Another category that the Pennsylvania Department of Education (PDE) uses is "Making Progress," which is for those schools and districts that have made AYP for one year only (a school or district must make AYP for two consecutive years to not be on any warning or corrective action status). Of the school districts in Allegheny, Washington, and Westmoreland Counties, 86% either made AYP or were considered "making progress" for 2004-2005, compared to 90% of districts in Pennsylvania. The districts in these three counties are therefore are a representative sample of districts for the state of Pennsylvania, comprising 6.5% of all public school students in the state of Pennsylvania in 2004-2005 (Pennsylvania Department of Education, 2005).

Hence, Southwestern Pennsylvania represents a particularly interesting area for study. When the aforementioned expected teacher turnover happens, any stability that occurs as a result of the state assessment exams may be threatened. For example, suppose a school district has twelve mathematics teachers for grades 9-12. Suppose further that half of these teachers have at least thirty years of teaching experience. If the district negotiates a teacher contract that includes retirement incentives – recently popular in Pennsylvania districts - such as extended health benefits, retirement cash bonuses, etc., then it is probable that the six teachers may retire within a time frame as close as two to three years. If the district is fortunate enough to replace these teachers with a few

teachers that have a few years of experience, it has still lost roughly 150-160 years of teaching experience with the retirements.

As stated previously, beginning teachers typically struggle quite a bit (e.g. Hebert & Worthy, 2001; ERIC Clearinghouse on Teacher Education, 1986). It has also been previously stated that anywhere from 30-50% of teachers leave the profession altogether within the first three to seven years (e.g. Bartell, 2005; Breaux & Wong, 2003; Darling-Hamilton, 1996 & 2003; Gibbs, 2005; Wong & Wong, 2001; Scherer, 2005). The aforementioned hypothetical school district's high school mathematics department, therefore, will have transformed from a stable veteran group to an unstable inexperienced group in a matter of a couple of years. Any stability that would have been manifested in high student achievement and performance on the PSSA would also have been negatively affected. This reiterates the importance of having strong teacher induction programs for teachers new to the profession as well as teachers new to a school district.

Description of Sample

For this study, a random sample of convenience was used. Specifically, teachers and administrators from three counties in Southwestern Pennsylvania – Allegheny, Washington, and Westmoreland – were surveyed. It was not feasible for this research to survey this entire population, nor could it be assumed that every district would give permission for this survey to be given. All 74 districts were asked for their permission to participate in this survey, and surveys were disseminated to those districts. To protect the anonymity of the participants, the surveys were collected and tabulated by study groups only – no identification of participating districts or schools were reported. The survey was built into an Internet survey site that collects data from surveys anonymously.

These schools are geographically in the urban and suburban areas of Pittsburgh, and they are close enough in proximity that the surveys can be sent and collected fairly easily in a timely fashion. These districts comprise a wide range of socioeconomic statuses in the region, ranging from poor to wealthy districts. The student populations of these schools are wide-ranging, from small (population of approximately 4500) to large (population of approximately 340,000) (Pennsylvania Department of Education, n.d.). In examining the schools in Allegheny, Washington, and Westmoreland Counties, these serve quite diverse student populations in terms of socioeconomics, demographics, and size.

This method of random sampling (convenience) may have lead to slight limitations of the reliability of this study. Although Southwestern Pennsylvania is a representative sample of the state, it nevertheless does not represent all the other areas of the state. In particular, many of the regions of Pennsylvania are more rural than Allegheny County, so this limits the sampling reliability somewhat. However, this study is meant to represent a dichotomy of districts, which the sample does. Furthermore, this study should be considered in the context of what will be reported by educators in Southwestern Pennsylvania, and there is no claim that these results represent the state of Pennsylvania as a whole. However, the sample size also helped to determine the reliability of the study and the extent to which the results could be generalized.

The No Child Left Behind legislation standardizes much of what is expected for states to report how well students are learning, but each state still has the autonomy to choose how this will be done. Therefore, to pick a sample of educators from one state limited the broadness of the scope of the study. Particularly, many states' school

districting systems are not the same as Pennsylvania – for example, many states group their districts by counties instead of by smaller geographical areas. Realistically, though, since the sample of convenience was taken from a diverse group of school districts in a concentrated area of Pennsylvania, and many of the issues surrounding new teachers are the same throughout the country, as evidenced in much of the previously cited literature.

The results of this study, then, are meant to be part of a preliminary step towards helping to stimulate conversation towards improving new teacher induction in Southwestern Pennsylvania, which may lead to improving new teacher induction programs statewide or nationally. Choosing a diverse representative sample from public schools in Southwestern Pennsylvania minimizes the possible limitations of using a random sample of convenience. The discussion emanating from the analysis and synthesis of the results of this study contains more concrete evidence of sampling limitations and strengths.

Data Collection

Likert-type surveys were used to collect data from the populations in this study. The statements for the surveys were gathered from recent research results regarding new teacher induction and based on the literature review. The focus was on nontenured teachers, recently tenured teachers, veteran teachers, and school administrators ranking features of inductions in order of importance according to certain categories. These categories were gleaned from the literature review, and the specific items surveyed were those that are mentioned throughout the literature and studies that have already been done regarding new teacher induction. Once these categories and items were grouped, they

were reviewed and revised by this researcher so that they represented new teacher induction issues completely, but not cumbersomely in the Likert format.

The Likert-type survey gave more detailed information about which new teacher induction components are most needed and used, least needed and used, and what is being done well and what is lacking, among other discoveries that became apparent and were impossible to predict beforehand.

Data Analysis

Once the data were collected, the responses were tabulated and examined. Each group of teacher surveys – nontenured, recently tenured, and veteran teachers - were analyzed to see which elements of teacher induction that each group of teachers perceived as being the most and least important; the same was done with the administrators' surveys. More comparisons were done according to the results of these surveys. Many possible questions could then be answered. For example, what do nontenured teachers think is effective in new teacher induction that school administrators do not think is important? Likewise, what do school administrators think is effective in new teacher induction that nontenured teachers do not think is important? What do both nontenured teachers and school administrators think is effective in new teacher induction programs?

Teachers groups were also examined for similarities and differences, as well as comparing the results of the administrators' surveys with recently tenured and veteran teachers. Essentially, a matrix was used to show the possibilities of comparing the richness of these data after they were gathered, shown in Table I:

Table 1: Similarities (same matrix used for differences)

	Nontenured Teachers	Recently Tenured Teachers	Veteran Teachers	Administrators
Nontenured Teachers				
Recently Tenured Teachers				
Veteran Teachers				
Administrators				

Besides this matrix of comparisons, there was also opportunity to compare and contrast different groupings of these categories of results. For example, is there an aspect of new teacher induction that all groups think is most important in a category except the veteran teachers, who think it is not important, and why would this be? Or, do administrators differ from teachers in their opinions of what should be prioritized regarding content of new teacher induction? Or still, do years of teaching experience change teachers' opinions regarding the most important aspects of new teacher induction? These are but a few examples of the rich results that could be generated upon analyzing and synthesizing this Likert-type survey.

Contribution to Educational Theory and Practice

Professional development of teachers has become an important topic in recent years in education as well as for the public. As a result, new teacher preparation has become a critical component for how schools are going to continue to improve. This study is intended to help to improve the effectiveness of new teacher induction, as well as continue to stir dialogue among educators regarding new teacher induction. Induction

topics that have been traditionally emphasized may be scrutinized; those topics that work can be kept and improved, while those topics that do not can be either changed or discarded. Furthermore, attention may be given to which new teacher induction topics have been prioritized, and which topics should or should not be prioritized among other topics, considering the experiences of those taking the survey.

Next, the things that have been done in new teacher induction will be compared with what research shows is effective and ineffective. Do the induction programs in Southwestern Pennsylvania emphasize what research shows is effective, or do they need to be changed in some ways? More importantly, are the topics emphasized in new teacher induction best meeting the needs of the new teachers? Whose opinions do and do not match among the study groups? This study should shed some light on the answer to these questions and other related questions that will be generated as a result of analyzing and synthesizing the data.

Finally, what are some things that new teachers think could be done to improve teacher induction? Traditionally, new teacher induction programs are created by administrators and/or veteran teachers. However, when one is in a profession for a number of years, one tends to forget what it was like when one started. Therefore, the data gathered from the nontenured and recently tenured teachers should prove invaluable, and it will be interesting and meaningful to compare these results with those of veteran teachers and school administrators. Then, the perspectives of what "has been done" and what "should be done" can be highlighted, and teacher induction programs will be better than they are - even those that are effective. Ultimately, this will lead to the teachers of

the future being better prepared for successful careers, and the students of the future will be the benefactors.

BUILDING THE SURVEY

Summarizing the Literature Review

Although the literature mentions quite diverse types of components that are recommended for new teacher induction, and although the authors of the literature use different terms that are not always universal, there nevertheless are several categories that are mentioned repeatedly throughout the literature. To reiterate, some of the authors and the most essential components of new teacher induction according to their writings are listed:

Danielson (1996) discusses four essential domains for new teacher induction: 1. planning and preparation; 2. classroom environment; 3. instruction; and 4. professional responsibilities. Danielson (2002) also has posited that transforming schools into learning centers for educators and community members is necessary to improve schools and enhance student achievement, and she describes some strategies that can help accomplish this: 1. professional development enabling teachers to engage in meaningful work with colleagues to strengthen knowledge and skills; 2. cultivating a culture of professional inquiry in teachers activities, teacher attitudes toward one another, and in teacher work; and 3. having teachers observe one another. Finally, Danielson & McGreal (2000) explain that three essential components of new teacher induction are: 1. collaboration; 2. reflection on practice, self-assessment, and self-directed inquiry; and 3. cultivating a community of learners among teachers.

Sergiovanni & Starratt (1998) discuss four standards for authentic pedagogy in terms of the students' interaction with the information at different intellectual levels: 1. higher-order thinking (students produce new meaning and understanding by manipulating information and ideas); 2. deep knowledge (thoroughness of instruction produces complex understanding); 3. substantive conversation (builds improved and shared understanding); and 4. connections to the world beyond the classroom. Sergiovanni & Starratt (1998) further believe that higher order thinking and questioning skills are a primary component to be used in a classroom to help students achieve.

Moore Johnson & Kardos (2005) believe that bringing veteran and novice teachers together should be a priority for building principals, since there are differences in their goals and expectations. They outline many strategies for accomplishing this: 1. treat the hiring process as the first step of induction; 2. assign new teachers to work alongside experienced teachers; 3. schedule time for new and veteran teachers to meet; 4. provide more than one-to-one mentoring; 5. develop school-based induction programs led by experienced teachers; 6. organize ongoing professional development on the curriculum; and 7. encourage teacher leadership and differentiated roles (Moore Johnson & Kardos, 2005).

Shank (2005) adds that the most valued means of support cited by new teachers in a high school that she studied are: 1. common workspace; 2. common planning time; and 3. common tasks.

Stigler & Hiebert (1999) name six principles for gradual, measurable improvement to improve all teaching: 1. expect improvement to be continual, gradual, and incremental; 2. maintain a constant focus on student learning goals; 3. focus on

teaching, not teachers; 4. make improvements in context; 5. make improvement the work of teachers; and 6. build a system that can learn from its own experience.

Bartell (2005) mentions that professional practice preparation is framed primarily into three categories: 1. knowledge about learners and learning; 2. knowledge about curriculum and teaching; and 3. knowledge about contexts and foundations of education. Also, Bartell (2005) views the important aspects in new teacher induction programs in seven categories: 1. procedural; 2. managerial; 3. psychological; 4. instructional; 5. professional; 6. cultural; and 7. political.

According to Breaux & Wong (2003), the purposes of induction are: 1. to ease the transition into teaching; 2. improve teacher effectiveness through training in effective classroom management and training techniques; 3. promoting a district's culture – its philosophies, mission, policies, procedures, and goals; and 4. maximizing the retention rate of teachers, and it must consist of training, support, and retention. Breaux & Wong (2003) also list their essential elements of successful induction programs: 1. start at least four days before school begins; 2. offer a continuum of professional development; 3. provide teacher study groups; 4. incorporate administrative support; 5. integrate mentoring; 6. provide structures for modeling effective teaching; and 7. provide opportunities to visit other classrooms.

Tickle (2000) discusses the importance of the following new teacher induction elements: 1. the very routines and functions of being a teacher; 2. aspects of professional knowledge; 3. knowledge of specific subject matter; 4. classroom management; 5. pedagogical skills; 6. the working context of the school;

7. curriculum; 8. assessment; and 9. the importance of identifying the type and nature of professional knowledge required of prospective teachers, including the kinds of persons they should be or be willing to become.

Feiman-Nemser (2003) suggests that some of the most important things new teachers need to learn as quickly as possible are: learning how to "think on their feet" (i.e. be able to spontaneously react to unexpected situations), making quick decisions, studying the effects of their practice, and learn how to learn desirable lessons from their early teaching experiences. These are some of what may be considered as "intangibles" for new teachers to learn – that is, talents and teaching capabilities that new teachers already inherently have when beginning in the profession, and which need nurtured and cultivated throughout the early years of their careers (Feiman-Nemser, 2003). Feiman-Nemser (2003) further believes that new teachers crave some things at the beginning of their careers, such as opportunities to learn from veteran teachers, being able to discuss curriculum, learn how to address specific students' needs, and gain insight from other teachers regarding subject matter.

Besides new teacher induction programs consisting of progressive stages of achievement, other characteristics are equally important, for example: the induction program justifies its own importance; the program cultivates mutual support; long-term goals are addressed; teacher expectations and norms of conduct are clearly delineated; and the program is tightly organized, consistent, and continuous (ERIC Clearinghouse on Teacher Education, 1986). As with many other induction items, many of these address the "intangibles" of teaching, i.e. what prospective teachers already know when entering the profession. According to this same article, the most prevalent components of existing

new teacher induction programs are internship status, mentors, induction committees, and orientation seminars (ERIC Clearinghouse on teacher Education, 1986).

Berry, Hopkins-Thompson, & Hoke (2002) name several essential components of effective teacher induction programs: opportunities for novice teachers to observe and analyze good teaching; assist novices in transferring knowledge necessary to improve student learning; ongoing guidance for new teachers; reducing work loads for beginning teachers; having rigorous evaluations of the program itself; cultivating a network of new and experienced teachers; and focusing on collaboration.

Finally, the NEA (2002) also has clear expectations for what should be included in the support system for new teachers: the program must be designed, established, and funded by the district, overseen by a committee, available to all new teachers, mentor-based, introduced with a new teacher orientation, mindful of new teacher assignments, supportive of collaborative learning, rich with professional development, and helpful to administrators.

There are some underlying themes among these different beliefs about the essential components of new teacher induction. It is important, therefore, to decide on some main categories that are prevalent, some secondary categories that are mentioned more than once, and some less primary categories that may be of interest in discovering the differences and similarities between and among the groups of educators that will be surveyed. To this end, a more detailed breakdown of new teacher induction elements and categories is delineated in Appendix C.

Categories to the Survey

Obviously, surveying teachers and administrators on all aforementioned new teacher induction elements and categories as detailed in Appendix C would be cumbersome and would likely not yield meaningful results. Therefore, it is important to compress these into manageable categories and to determine which items are most important to survey and will yield meaningful results for discussion. Some topics (i.e. classroom management, mentors, relationships with colleagues) are mentioned in almost all teacher induction literature, while other topics are only mentioned by one or two authors, depending on their personal philosophies.

Delineating new teacher induction elements into categories may be begun by reexamining the new teacher needs categories named by Bartells (2005): procedural, managerial, psychological, instructional, professional, cultural, and political. A perusal of the various items in the literature (see Appendix C) shows that these categories are comprehensive, but some other categories would be needed as well. For example, 'working with parents' could fit into one of the aforementioned categories, but another category would be more appropriate, such as 'interactions' or 'communication.' After studying the hundreds of potential survey items and determining that several other categories exist that appear in the literature, the following categories were added: interactions, observations and feedback, support, communication, structure of induction program, content of induction program, and student needs.

The process of assigning categories to each of the potential survey items in Appendix C then took place, and it was readily apparent that the category 'content of induction program' was redundant, since most of the other categories encompassed this

item; therefore, this category was deleted. Furthermore, it was apparent that another category – planning - would be helpful, instead of putting these items into the 'managerial' category. The example of 'working with parents' fitting into the category of either 'interactions' or 'communications' also delineates another tweak that occurred as these survey items were categorized. Namely, the categories of 'interactions' and 'communication' were combined into the category 'interactions and communication,' and also the categories of 'professional' and 'support' were combined into the category of 'support and professionalism.' Then, all the potential survey items were sorted by category, and all similar items were combined together. A detailed explanation follows in the next chapter.

Chapter III METHODOLOGY

Once the survey was built, it was necessary to explore the methodology that would be used to gather the data for this study. This chapter gives an overview of the methodology, then describes in detail the iterations that took place to condense the hundreds of potential survey items into a manageable survey that still had the richness of the items gathered from the literature review. The final survey is then described, including how it was built into an online survey. Finally, this chapter describes the process that was used to collect the data from the survey so that an analysis and synthesis of the data could take place.

As discussed in the overview of this study, Likert-type surveys will be used to collect data from the populations in this study, and the statements for the surveys will be gathered from recent research results regarding new teacher induction and based on the literature review. This presents a challenge for gleaning meaningful results, since there are various ways to craft a Likert-type survey. For example, suppose a rating scale would be used from 1-5 in importance, with 1 standing for "strongly disagree," 2 for "disagree," 3 for "neither agree nor disagree," 4 for "agree," and 5 for "strongly agree." This likely would not produce meaningful results from any of the study groups - nontenured teachers, recently tenured teachers, veteran teachers, and school administrators – nor would the results likely produce differences and similarities amongst these groups.

For instance, consider the potential survey items, "Using effective instructional practices, strategies, and techniques (i.e. cooperative teaching and learning; setting tasks for whole-class, individual, cooperative, and group work; etc.) and selecting instructional goals" and "special education issues." Given the aforementioned Likert-type scale, it is

unlikely that any of the educational groups identified would answer that these items are not important for new teachers to have in induction programs (or any teachers, for that matter). When tabulating the results, then, both of these items would likely rank very high, as would many of the other items in the survey. This would simply imply that all of the study groups believe that research-based new teacher induction topics are all important, which would lead to a simple and bland conclusion. Rather than using this type of rating scale, a ranking type of scale would prove more beneficial and meaningful.

Therefore, after careful consideration and consultation, the survey was crafted in the format of separating categories of new teacher induction items from the literature, and clustering items together within these categories. Then, a Likert-type ranking system will be implemented within each of these categories, asking the study groups to rank the items in order of importance from most important to least important. This will ensure that the results likely will glean rich results, and it will be interesting and meaningful to compare and contrast the similarities and differences among and between the study groups' ideas of which new teacher induction items are most and least important.

Without bias and before this study was conducted, the prediction of this researcher was that there would be some striking similarities of items which all the study groups believe are important in new teacher induction. Also predicted by this researcher was that there would be some striking differences between the results for some groups. It was interesting and meaningful to see which groups were most similar and which were most different, and this in turn lead to a need for further future studies as to the reasons for these similarities and differences. Moreover, it was interesting and meaningful to

speculate as to which of these groups could or should have the most input as to what is important in new teacher induction.

Building the Survey for Identified Research Groups

After sorting all the potential survey items by category, items that were similar were combined, redundant items were deleted, and vague items were removed, such as "motivation and rapport" and "being organized." The goal was to be as thorough, yet concise, as possible, focusing on the items that were most relevant to new teachers and that were predominant in the literature regarding new teacher induction. As this process unfolded, there were several iterations of combining, narrowing, and deleting potential survey items. This task can be summarized according to survey categories as delineated in the overview.

SURVEY ITEMS - ITERATION I

Interactions & Communications

This category contained the largest amount of items other than "instructional." However, there were several preliminary items that were redundant because they were repeated or vague. The repeated items, though, were important to include, since they represented items that appear in most of the literature, as they were for each category. For example, "new teacher study groups," "availability of experienced colleagues," "colleagues who will take new teachers' daily dilemmas seriously," "providing new teachers with co-planning time with other teachers," "participating in a support group dedicated to sharing information about successes and concerns, to effective practice, and to action research," "discussing their needs with others," and "providing a network of new and experienced teachers with whom they can share concerns, discuss issues, and explore solutions" all address the same issue, and were therefore combined into one

category. Furthermore, since the interactions with parents were found throughout the literature, this was assigned as a definite survey item to be used. Clearly, one of the next iterations would necessitate combining these similar ideas into a condensed and coherent survey item that still has the same meaning as these separate concepts.

There were quite a few potential survey items in this category that were repeated, such as mentoring, study groups, and peer and colleague support. At the same time, there were several potential items that were worthy of keeping, but may have only appeared in one or two pieces of literature, e.g. opportunities for teachers to describe their work to the faculty, cognitive coaching, and participation in decision-making. In keeping these items, it became apparent quickly that this phase of editing potential survey items would not be completed in one step, since the number of items remaining would still be cumbersome to include in a survey. Furthermore, it became apparent at this early stage that it would be important, although tedious, to pare these survey items down so that each section of the survey would contain a meaningful but manageable amount of items to rank. It would, for example, probably not be meaningful to have the study groups rank four items, but it would also be cumbersome to expect the study groups to rank twenty items in a section. Therefore, at this point in the process, a goal was set of having roughly six survey sections with roughly ten items to rank in each section. Given the large number of potential survey items (see Appendix D), this task was somewhat daunting, but necessary, considering that the first iteration consisted of twelve sections with up to sixty-one items.

Continuing the process with the category of "interactions & communication," several items were eliminated either because they were vague (e.g. motivation and

rapport, engaging in meaningful work with colleagues), they were redundant because they appeared elsewhere in other items (e.g. mentoring, establishing rapport with faculty and staff), or they were not as prevalent in all the literature as some other items (i.e. relationships with supervisors, dealing with negative coworkers, being introduced to the faculty). This was a painstaking process, since it was necessary to not eliminate important potential survey items, but narrowing the number of items was imperative for the survey to not be too cumbersome. Much of the literature was revisited throughout this process to assure that the most important items *related specifically to new teacher induction* were kept. This became the ultimate underlying theme as the survey was crafted.

Perhaps the most telling example of this was the decision to eliminate "relationships with parents" and similar parental-related survey items. The most successful educational leaders typically include parental communications as a necessary component of their success. However, the question at hand was, is discussing parental communication a necessary and important part of new teacher induction programs? Also, is this concept as necessary to include as others, such as opportunities to visit other classrooms? It may be argued that discussing parental communication should be included as part of this type of survey, but after revisiting some literature and reflecting upon this, it was decided that perhaps the most effective way for a new teacher to become successful in parental communications is to actually experience such communications, and that any ongoing new teacher induction program would most likely address this on an example by example basis. Therefore, although a valid argument could be made to include parental components in the survey, in the interest of narrowing the items to a

manageable amount, and with the previous thought process, this item was eliminated at this stage. This was not atypical – in fact, there were some other painstaking moments during the continuing process of crafting the survey.

Procedural

This category contained only sixteen items at the outset, and they stood out due to their brevity as compared to other sections. Combined were "dismissal at the end of a period or day" with "start of a period or day," "district policy" with "building policy," and "locating materials and other resources" with "obtaining instruction resources and materials." Eliminated were "transition" and "procedures" because they were much too vague, and also eliminated was "being introduced to school facilities" since the tone of this was reflected in other sections of survey items. That was the entire first iteration of this category and is included in this summary to show the complete process; however, it is unnecessary and would be cumbersome to delineate in this much detail for every section and each survey item in this process. The complete results of all iterations are contained in Appendix D.

Managerial

The process continued similarly in the same way for this category. However, for the first time in this process, some items were moved from this category to other categories that were more relevant. Since the initial categorization that took place was predicated upon all potential survey items for the survey, this was an expected part of the process. The items "managing classroom procedures," "getting materials and supplies," and "class size" were removed from the managerial category to the procedural category upon reflection. Similarly, "disruptions that came with the shift from studenthood to being a full time teacher" was more appropriately placed in the psychological category.

Other items were eliminated or combined using the same aforementioned process that was used for the other categories. In fact, this process was continued for each remaining category – psychological, instructional, professional & support, cultural, observations & feedback, structure of induction program, student needs, and planning – with the exception of political, which will be discussed separately. Since this process was the same, it is not necessary to repeat examples for each category, suffice to say that this process continued until this first iteration was done. The only remaining item of discussion for this iteration surrounds the category of *political*.

Political

After categorizing all potential survey items, there were only five specific items that were considered as political, and three of these were too vague to include (political, personal, organizational) in the survey. Therefore, it was evident that this category would not be included in the survey, but there was still the question of where to include the remaining two political items, "role and purpose of school governing bodies" and "impact of teacher unions." It was therefore decided that these two items would not be used. This is not to suggest that these items do not play a role in teacher development – in some school systems, political items such as this play a significant role (for example, teacher bargaining units deciding to go on strike certainly affect the educational environment). However, since new teachers do not acquire tenure until having a minimum of three years of contiguous experience in Pennsylvania, most do not become intricately involved with such political entities until after having acquired tenure. Therefore, although political aspects of school districts affect teachers, the political items for this particular study will not be addressed.

SURVEY ITEMS - ITERATION II

During the first iteration of crafting the survey, many survey items were eliminated due to redundancy or due to belonging to another category. However, there were also some items that were purposely left in two or more categories, since there could possibly be rich results in comparing how similar survey items were ranked in different categories. During the second iteration, the intent of proceeding in this manner became less plausible. Since the goal was to pare the survey items in a meaningful yet comprehensive manner, it became clear that having items appearing in more than one section would render the goal less effective. Having items cross over from one section to another would not be feasible if part of the goal is to be as comprehensive as possible.

The process during this iteration was similar to the process used for the first iteration – that is, eliminating some items, combining some items, and moving some items from one category to another. During this iteration, though, when considering the implausibility of having survey items appear in more than one category, and further considering the goal of reducing the number of survey sections to six, it became clearer that some current categories would be better combined during this iteration. The most obvious combination at this stage was to combine procedural and managerial items, especially considering that a few managerial survey items were moved to the procedural category during the first iteration, and before combining these categories, some other items seemed more appropriate as procedural than managerial.

It also became apparent during this iteration that the most difficult task would be to pare the *instructional* category to a dozen or so survey items. This was by far the most extensive, and perhaps the most important, of all the new teacher induction categories,

and even when combining items, it would be a daunting task to pare this category. It therefore would probably require several more iterations before at least this category would be finalized.

The second iteration found the *cultural* category as having only six remaining items, although the first two items now needed to be reworded and pared into manageable potential survey items. It was at this point also that eliminating this category was considered, similar to the *political* category. Since two of the items had to be edited, though, it was decided to keep this category for this iteration, with the thought that it may be eliminated or combined during a future iteration.

A different thought process began taking place for the last few categories during this second iteration. Although the category of *student needs* had been created during the sorting of the potential survey items, and there were still eight items in this category, the remaining items could easily be moved to other existing categories, thereby eliminating the need for this category. Items such as "students seeking help," "creating an environment of respect and rapport and positive expectations for student success," "using and incorporating student ideas," and "ensuring that students are aware of the substance and purpose of what they are being asked to do" could validly be moved to the *instructional* category (even though this would add to the dilemma of paring instructional items). After moving all the items, this category was eliminated.

Similarly, the items in the *planning* category could now validly and readily be moved to other categories, such as *instructional* and *management*. This category was therefore eliminated. Many of the items in the *structure of induction program* also at this point seemed able to be moved readily to other categories, but this was not done during

the second iteration. Two categories had already been eliminated, and the category in question still had over a dozen items remaining. This category was left in place for these reasons during this iteration. Much work still remained, but the items and categories were beginning to resemble valid potential survey items.

SURVEY ITEMS - ITERATION III

Striving to further refine the survey, it was still quite important to not eliminate important potential survey items, but narrowing the number of items was still necessary. Once again, much of the literature was revisited to assure that the most important items *related specifically to new teacher induction* were kept. As previously stated, this became the ultimate underlying theme as the survey was crafted and edited, and it was now more important than ever, and remained a priority throughout the rest of the narrowing process.

The third iteration consisted mainly of rewording and condensing several items for each category, especially *interactions & communication*. "Cognitive coaching" was also eliminated as a survey item, even though it appeared in a few pieces of the literature. The reason for this decision was that a term such as "cognitive coaching" has a deep meaning, and it cannot be assumed that the term would be interpreted the same for every person taking the survey. Therefore, to strengthen the validity of the study, this item was eliminated.

Another dilemma was solved during this iteration – what to do with the *cultural* category. *Psychological* was now down to a manageable seven items, dealing with attitudinal, motivational, and emotional issues. *Cultural* also now consisted of seven items, but there was still some paring of the number of categories to be done. Upon

further examination, there were some natural similarities between these two categories; for example, “adjusting to the teaching environment and role” was in the *cultural* category, while “disruptions that came with the shift from student-hood to being a full-time teacher” was an item in the *psychological* category. These two items were easily combined into one survey item - *psychological & cultural*. Further refinement would take place in future iterations.

It has been mentioned that the items in the *structure of induction program* category could be absorbed into other existing categories, thereby narrowing the amount of potential sections of the survey itself. However, upon reflection, it was apparent that at this point in the process, perhaps some of the most interesting and meaningful results could be gleaned from those items in this category that remained. For instance, two distinct items were, “the induction program consisting primarily of formal seminars” and “the induction program consisting primarily of informal workshops.” Clearly, since these two items are opposites, it would be interesting to review the results of each study group to examine the differences and similarities. Therefore, this category remained intact at least for the time being. The process then continued.

SURVEY ITEMS - ITERATION IV

At the outset of this iteration, there were seven categories, the goal still being six. Many of the existing categories, however, still contained dozens of potential survey items. This iteration therefore consisted largely of further combining existing items and editing existing and combined items to be coherent and comprehensive but not cumbersome.

The category *interactions & communication* was almost finalized by this time and was refined more than any other category. "Providing new teachers with co-planning time with other teachers" was combined with "peer mentoring," and "supervision of volunteers and paraprofessionals" was moved to this category from *procedural & managerial*. Although this category was close to completion during this iteration, the others still required much work to refine them.

Twenty items still existed in the category *procedural & managerial*, and this iteration saw many more items being combined, as well as an item being moved to another category as previously mentioned. This process became less clear, because combining some already wordy and lengthy items meant that much more editing would need to take place. For example, "organizing instruction; organizing physical space & room organization & environment organization; managing instruction" was clearly in need of rewording and clarification, but it was now being combined with "creating an environment of respect and rapport & positive expectations for student success." This brought to light the saying that sometimes things need to get more difficult before they get easier. Other items were combined in similar fashion, such as "effective time management" and "high levels of time on task & setting tasks for whole-class, individual, and group work & getting students to work cooperatively." This was also the case for the newest combined category *psychological & cultural*.

The task for most of the other remaining categories – *instructional*, *professional & support*, and *observations & feedback* - was more of rewording and editing existing items to be comprehensive yet not cumbersome. An existing current item in the *instructional* category, for example, was "assessment techniques & assessing student

learning & evaluating student progress & developing and administering informal classroom assessments & learning how to use data on student assessment to improve instruction & the induction program addressing a variety of student evaluation processes." Clearly, the task was to revise this potential survey item to include in the survey. Another important aspect was that wordy items consisted of those concepts that appeared in several places in the literature, so it would be important to not only edit such items, but also to definitely keep these items as part of the survey.

SURVEY ITEMS - ITERATION V

Consideration was given to further combining categories with the goal of reducing the number of sections of the survey to six. At this juncture, the only feasible categories that seamlessly could be combined were *interactions & communication* and *observations & feedback*. Although this would have accomplished this goal, there were definite delineations between the two categories that would have probably weakened some of the richness of the results. *Observations & feedback* focused largely on new teachers being observed formally and informally, as well as having the ability to observe other teachers. Conversely, *interactions & communication* had items that dealt primarily with issues outside the classroom.

As previously discussed, there was also the possibility of doing away with the category of *structure of induction program* by moving the remaining items to other categories. While this would be possible, the same argument applied that this would probably compromise the richness of the results. Therefore, to keep the survey as meaningful as possible, the decision now was to have seven sections to the survey.

This iteration finally saw the finalization of a few categories, while other categories still needed much editing. Specifically, *interactions & communication* was basically complete with eight survey items; *psychological & cultural* was complete with ten survey items except for some minor editing; *structure of induction program* was essentially complete with eight survey items; and *observations & feedback* was complete with ten survey items and some minor editing. *Professional & support* still contained thirteen items, and after much deliberation and consultation with some educational professionals, it was determined that every section should optimally contain about ten items.

The latter category therefore still needed work, but not as much as the two largest remaining categories, *procedural & managerial* and *instructional*. This proved to be still a daunting task for a number of reasons. Recall that *procedural & managerial* was originally two distinct categories that were combined during an earlier iteration. There still was a great need for combining like items, rewording items, and still determining if there were some items that could or should feasibly be eliminated altogether. The *instructional* was not a combined category, but it originally consisted of the largest number of items delineated from the literature. Since this category also arguably was one of, if not the, most important categories regarding new teacher induction, it was still a dilemma to try to whittle the number of potential survey items to a manageable number from this particular category.

SURVEY ITEMS - ITERATION VI

Completely done at this iteration were four of the seven sections – *interactions & communication* with eight survey items, *psychological & cultural* with ten items,

structure of induction program with eight items, and *observations & feedback* with ten items. The *professional & support* category was close to done, having twelve remaining items. "Culture of professional inquiry" and "relationships with colleagues" were thus eliminated mostly because compared to the other remaining items, these were rather vague.

The category *procedural & managerial* still consisted of sixteen potential survey items, which was still too many, since asking educators to rank this many items would likely decrease the validity of the study. "Handbooks with key information such as district and building policy" was eliminated, since although these likely would be given at induction, the specific information in the handbooks would be topics that were already dispersed throughout the remaining survey items. Similarly, the *instructional* category still contained seventeen items, and more editing had to take place. In order to focus more clearly on these remaining categories, the completed categories were taken out and put into the Likert-type survey format, and the remaining categories were left with the minor revisions for yet another iteration.

SURVEY ITEMS - ITERATION VII

Finalized categories were moved from the iteration working survey into a structured Likert-type survey, the first two versions of which can be found in Appendix E. The seventh iteration consisted solely of the two remaining categories – *procedural & managerial* and *instructional*. Since each of the remaining categories contained too many items to include as separate sections, splitting the *procedural & managerial* category back into two distinct separate categories was considered. Further considered was the possibility of splitting the *instructional* category into two separate sections.

However, this would have posed some old and new problems. Splitting these categories would expand the survey from seven sections – already one more than the original goal – to nine; this would not be optimal. Another new problem that this would have created would be the necessity to separate instructional items into two separate categories. This would weaken the validity of the study, since there would have to be some sound rationale as to how and why this category was split. Therefore, it was decided to forge ahead with the immediate goal of whittling the two remaining categories into roughly ten items each.

While then examining the first of the remaining categories, it was apparent that several of the remaining items would be appropriately placed in the second remaining category. Specifically, "planning, organizing and managing instruction, physical space, and the classroom to help create an environment of respect, rapport, and positive expectations for student success" and "setting tasks for whole-class, individual, cooperative, and group work" were moved from the *procedural & managerial* category to the *instructional* category, which exacerbated the existing problem of already having too many items in this category, but it was decided to deal with this dilemma separately. The items "working with special needs students" and "dealing with crises/crisis management" already existed in the *instructional* category, and were therefore eliminated due to redundancy. This reduced the category to eleven items. Although the goal was ten items, strictly adhering to is could not satisfactorily justify eliminating or combining any remaining items, so the category *procedural & managerial* was completed and was moved to the Likert-type survey format.

In the interest of being able to clearly sort the remaining items in the *instructional* category, especially with some new items having been moved, the decision was made to work with yet another iteration, solely to work on this category. Therefore, the only remaining category with which to grapple was the *instructional* category.

SURVEY ITEMS - ITERATIONS VIII & IX

Instructional was the only remaining category, but it now consisted of eighteen items, far too many for the survey. Although it was still tempting to separate these items into two categories, the validity of the survey could not be compromised, since it would not then be possible to delineate which instructional items were most and least important between the two split sections of the same category. Therefore, further combining of the remaining potential survey items had to be done.

"Using effective instructional practices, strategies, and techniques, and selecting instructional goals," "using cooperative learning, collaboration with other teachers, and cooperative teaching," "using large-group, small-group, and one-on-one instruction," and "setting tasks for whole-class, individual, cooperative, and group work" were combined and reworded; "knowledge of teaching resources, subject/curriculum, pedagogical content, and ways of teaching specific subject matter" and "transferring the acquired knowledge, skills, beliefs, and attitudes needed to improve student learning" were combined and reworded; "encouraging active student participation for student learning and to motivate students, while using appropriate and varied questioning and discussion techniques" and "using and incorporating pupil ideas as students seek help" were combined and reworded; and "setting clear targets for students' learning, linking performance to high standards, and setting appropriate levels of expectations for student

achievement" and "ensuring that students are aware of the substance and purpose of what they are being asked to do" were combined and reworded. This reduced the number of survey items in the *instructional* category to twelve, which was still more than the optimal ten. Again, strict adherence to a goal of ten items could not satisfactorily or validly justify eliminating or combining any remaining items, so the final remaining category *instructional* was completed and was moved to the Likert-type survey format.

- This completed the categories and items for the Likert-type survey. The survey was then organized with directions and spaces for the study groups to rank the items for each section.

FINAL SURVEY

Although the survey was created by taking the important items regarding new teacher induction programs from the literature review, categorizing them, editing them, combining them, deleting some, and rewording them, there still was a bit of minor editing to be done upon reviewing the first version of the Likert-type survey. In order to achieve results that would be rich and valid, it would be important to primarily make the survey items as clear in meaning and intent as possible. Therefore, some minor rewording and editing was done, but the first version of the final survey instrument is in Appendix E.

The original directions stated: "Please rank each of the following statements below from 1-{max}, with 1 being the most important to {max} being the least important regarding new teacher induction." This did not, however, seem to be quite clear enough. Particularly, the final phrase, "regarding new teacher induction," was vague in meaning. The second version, then, was changed to state, "Please rank each of the following

statements below from 1-{max}, with 1 being the most important to {max} being the least important regarding *areas that should be focused upon <u>the most</u> in* new teacher induction." This made the directions clearer, and informal discussions with current educators confirmed the clarity of the directions.

Once the survey was near completion, a few more revisions were made to make the items more clear. For example, in the category of *psychological & cultural*, the item "becoming acculturated and oriented to school system and school building (4-5 days before school begins) to help the new teacher feel comfortable understanding of and learning about school community, organizational culture, the school system, school norms, and the rites and rituals of the organization" was edited to read "to help the new teacher feel comfortable by becoming acculturated and oriented to school system (4-5 days before school begins), and to learn about school community, organizational culture, the school system, school norms, and the rites and rituals."

A few items in the category *professional & support* were also edited without changing the meaning of the items, with one exception. The last item was written as "setting goals for self-improvement, receiving guidance for collecting artifacts for a portfolio, and transferring the acquired knowledge, skills, beliefs, and attitudes needed to succeed." Upon further examination, the concept of a new teacher assembling and organizing items for a portfolio was mentioned separately in a few different parts of the literature, so it was decided to separate the clause regarding a portfolio into another item and rewrite the directions to reflect eleven items instead of ten. Thus, the two revised items were "setting goals for self-improvement, and transferring the acquired knowledge, skills, beliefs, and attitudes needed to succeed" and "receiving guidance for collecting

artifacts for a portfolio." Thus, the final survey instrument was completed, ready for disbursement.

University of Pittsburgh Institutional Review Board/Online Survey Site

All necessary required documents were submitted to the University of Pittsburgh Institutional Review Board for review and approval. Meanwhile, an online method of disseminating the survey was explored. Eventually, an online survey site, www.surveymonkey.com, was contracted to host the survey, gather the results, and tally the results. It was evident that further editing to the survey items would need to occur for a couple of reasons. Some of the survey items that contained several clauses were too cumbersome to include in the online version. While transferring the survey from word processing format to the online survey site, the length of some of the survey items made the it much less user-friendly than expected. Therefore, although the final survey that was disbursed (Appendix G) was more concise than the final iterations previously discussed, the intent of each survey item was kept intact.

However, two of the remaining questions referenced teacher unions and governing bodies of school districts. The intent of these questions was to glean information regarding the political aspects of teaching in regards to new teacher induction. However, the fact that political topics were not mentioned prevalently in the review of the literature is an indication that perhaps this is not as relevant to the study as the items that were retained. Two other potential interview questions were in reference to educators reflecting upon their new teacher induction experiences and how it had shaped their development, and changes to teaching practices as a result. The intent of these

items was embedded in many of the survey items that already exist (e.g. using effective instructional practices, analyzing teaching and learning styles, providing feedback, etc.) Finally, one question asked how induction programs could be structured to increase the retention of greater numbers of highly qualified teachers. Inexperienced teachers would likely not have the knowledge or experience (or even interest) to answer this question in an interview format, and the notion of highly qualified teachers requires a definition unto itself for this question to generate meaning.

The survey items, as has been discussed, were gleaned from extensive review of relevant literature in new teacher induction. The number of items to be ranked, together with the four different study groups, would likely generate plenty of data to be analyzed and synthesized comparing and contrasting what the different study groups think are most important regarding new teacher induction. A closer inspection of the tentative interview questions also revealed that they were already imbedded in the survey, are not relevant to the discussion, and are somewhat nebulous in definition. Therefore, after this analysis, the interviews were terminated from this study. Rather, once the results of the surveys are gathered, analyzed, and synthesized, correlating the results to the literature and studies that already exist regarding new teacher induction would be more rich and meaningful.

To properly administer the surveys with permission from school district superintendents, more documentation was crafted. A cover letter that explains the survey, states the purpose of the study, and asks permission from the superintendent can be found in Appendix F; this was sent to all superintendents of all the public school districts in Allegheny, Washington, and Westmoreland counties in Southwestern

Pennsylvania. A pre-addressed stamped postcard was also sent in this mailing, which also is in Appendix F. Once written permission was obtained from a superintendent, an email – included in Appendix F -was sent to all professional staff of that district that again stated the purpose of the study, explained that written superintendent permission was given, discussed the anonymity of participants, and contained an online hyperlink to the survey.

The survey was online for approximately 60 days for professional staff to take. One minor problem that occurred was that anytime the link was accessed, it appeared in the results of the survey on the online site. In other words, anyone linking to the survey who then exited without answering any survey items was counted as one participant who left all questions blank. To delete these blank surveys from the results, every survey was accessed to view if the survey was at least partially completed. And all blank surveys were deleted before the results were gathered.

Collecting the Data from the Online Survey Site

Once the online survey site was closed, the results of the survey were downloaded from the site into spreadsheets. A random check was done to verify that there were no blank surveys, and the surveys were downloaded with and without filters. Specifically, the matrix as shown again in Table I was used when comparing the study groups as the template for gathering the information:

Table 1: Similarities between Study Groups (same matrix used for differences)

	Nontenured Teachers	Recently Tenured Teachers	Veteran Teachers	Administrators
Nontenured Teachers				
Recently Tenured Teachers				
Veteran Teachers				
Administrators				

Therefore, the data were filtered according to all the different permutations of the study groups according to the way the first question was answered (asking their current educational position):

- All Study Groups
- Untenured Teachers only
- Recently Tenured Teachers only
- Veteran Teachers only
- School Administrators only
- Untenured and Recently Tenured Teachers
- Untenured and Veteran Teachers
- Untenured Teachers and Administrators
- Recently Tenured and Veteran Teachers
- Recently Tenured Teachers and Administrators
- Veteran Teachers and Administrators
- Untenured and Recently Tenured and Veteran Teachers

- Untenured and Recently Tenured Teachers and Administrators
- Untenured and Veteran Teachers and Administrators
- Recently Tenured and Veteran Teachers and Administrators

These permutations of data were downloaded in spreadsheet form. Thus, all iterations of comparisons between and among the study groups could be examined. Other iterations still were possible – for example, the number of participants who answered "most" for items in different questions could be gathered for examination. This would not be necessary until determining the similarities and differences between and among the various study groups, considering the vast number of queries that could be done for the number of survey items. Only then would meaningful queries be necessary to study, analyze, and synthesize.

Chapter IV DATA COLLECTION AND ANALYSIS

Once the data were collected, an intensive data analysis and synthesis was done to explore the findings from this study. This chapter describes a summary of the survey, as well as explaining the types of analytical tools used for the analysis of each section of the survey. The chapter concludes by summarizing and synthesizing these results.

Survey Summary

The total number of participants for this study was N = 295. However, not every participant answered every survey item. As has been discussed, the survey was online for approximately 60 days for professional staff to take. One minor problem that occurred was that anyone linking to the survey who then exited without answering any survey items was counted as one participant who left all questions blank. To delete these blank surveys from the results, every survey was accessed to view if the survey was at least partially completed. And all blank surveys were deleted before the results were gathered. Therefore, the N = 295 includes all participants who answered any section of the survey besides the first demographic item (i.e. if a participant indicated to which study group they belonged, but did not rank any survey items, the survey was deleted).

The number of untenured teachers, recently tenured teachers, veteran teachers, and school administrators who participated in the survey is in Table II:

Table 2: Demographic Responses to Survey

Current Educational Position	Number of Respondents	Percentage of Total
Untenured Teacher	N = 83	28.14%
Recently Tenured Teacher	N = 67	22.71%
Veteran Teacher	N = 121	41.02%
School Administrator	N = 24	8.14%
TOTAL:	N = 295	

The online site generated the number of respondents of each item for each possible ranking, and an overall response average was calculated for each item. The results of the survey in this format for all participants are included in Appendix H. It would be cumbersome to sort through all possible iterations of four study groups in this format, so a condensed version that includes only the survey items with the overall response average for each iteration is found in Appendix I (one study group only), Appendix J (two study groups only), and Appendix K (three study groups only).

Mathematically, the minimum value of any possible combination of study groups for any single survey item cannot be less than the minimum value of any single study group for that same survey item. Given two positive numbers n_1 and n_2, where $1 \leq n_i \leq 12$ (since the most survey items in any single section is 12), there are three possibilities:

1. $n_1 > n_2 \Rightarrow (n_1 + n_2) / 2 > n_2 \Rightarrow$ combining groups n_1 and n_2 yields a mean value greater than the minimum of the single minimum group;

2. $n_2 > n_1 \Rightarrow (n_2 + n_1) / 2 > n_1 \Rightarrow$ combining groups n_1 and n_2 yields a mean value greater than the minimum of the single minimum group;

3. $n_1 = n_2 \Rightarrow (n_1 + n_2) / 2 = n_1 = n_2 \Rightarrow$ combining groups n_1 and n_2 yields a mean value equal to the minimum of the single minimum group.

This mathematical argument applies whether two, three, or four study groups' means are compared with the minimum value of a single study group. The same argument applies that for the maximum value of any survey item. Therefore, the beginning of the analysis logically is to examine the results of all survey participants and of each individual study group. The data for the combined sets of two and three groups would be considered if necessary after the initial analysis of the aforementioned data.

The data were examined three ways: 1) Each item in each section was examined for response average, 2) Each item in each section was examined for frequency of response regarding "most important" or "least important," and 3) Each item in each section was examined in the order in which the study groups ranked it. In terms of overall analysis, the former would likely be more useful to examine, since the skewing of the means of items ranked either more or less important is less affected than frequency of items being ranked. Furthermore, since the Likert-type scale was a ranking-type of measure, examining the average rankings is more closely aligned with the intent of the study examining the similarities and differences between and among the study groups. However, all three measures must be examined in order to calculate statistical significance of differences between study groups.

For these data, a hypothesis test needs to be set up as follows. To do inference about the difference between the means of two populations, the difference between the means of the two samples must be calculated. For purposes of this study, it was assumed that the samples gathered in this study were from populations that were normally

distributed. Furthermore, since individuals took the survey, the samples were independent; this was an independent-measures research design study. *This also means that although the overall rankings (all participants) were discussed in the narratives, all participants were* ***not*** *considered a study group for purposes of calculating statistical significance. Since each study group (untenured teachers, recently teachers, veteran teachers, and school administrators) is a nonempty mutually exclusive subset of the study group of all participants, all participants* ***cannot*** *be considered as an independent set. Therefore, only the four individual study groups were compared to each other regarding statistical significance, albeit two or three groups ould be compared with another independent group or groups.* Since σ (respondents) was unknown, a t-test must be used rather than a z-test. This t-test is a one-tailed test, since we were interested in determining whether or not the average scores of one study group were greater than that of another, given the number of respondents. Furthermore, since the administrator and teacher scores are repeated measures, a related-sample one-tailed t-test is the most appropriate hypothesis test to use.

The $\sum X$ values were calculated by multiplying the ranking order by the number of respondents for that ranking. The two-sample t statistic is calculated with the formula:

$$t = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{\sqrt{[(s_1^2/n_1) + (s_2^2/n_2)]}},$$

where x_1 and x_2 are the means of the two samples, μ_1 and μ_2 are the means of the two populations, s_1 and s_2 are the sample standard deviations, and n_1 and n_2 are the sample sizes. Thus, $x_1 - x_2$ represents the sample mean difference, $\mu_1 - \mu_2$ represents the

hypothesized population mean difference, and the denominator represents the estimated standard error. The estimated standard error of the mean difference estimates the amount of error expected when estimating a population mean difference with a sample mean difference.

For a two independent-measures t-test, the degrees of freedom *df* are calculated by adding the number of samples in each independent measure minus one each (to estimate the population rather than using the sample), or $df = df_1 + df_2 = n_1 - 1 + n_2 - 1 = n_1 + n_2 - 2$.

DATA ANALYSIS OF ALL PARTICIPANTS AND OF EACH INDIVIDUAL STUDY GROUP

Section 1: PSYCHOLOGICAL & CULTURAL

All participants, as well as each study group, agreed that the most important item in this section of the survey was "Maintaining a positive attitude, experiencing and building on successes, and receiving emotional support." "High expectations of what students can achieve to establish a culture for learning and student motivation" was ranked second by response average by all participants, untenured teachers, and school administrators, and it was ranked third by recently tenured teachers and veteran teachers. "Remaining calm and professional in the face of unnerving situations while learning to quickly recover from mistakes" was ranked second by recently tenured teachers and veteran teachers, and third by all participants and untenured teachers. However, this same survey item was ranked sixth by school administrators. Coincidentally, the item that was ranked third by school administrators, "New teachers learning what is expected

of them for success," was ranked sixth by all other individual study groups and all participants.

The three least important items were the same for all study groups and all participants, albeit not in the same order: "Focusing on 'survival level' of teacher development," "Understanding of cultural and ethnic differences," and "Dealing with fatigue." All study groups and all participants, therefore, agreed on the three least important topics in new teacher induction in this category. Other item rankings were the same or similar for all study groups: "The new teacher becoming acculturated and oriented to school system, building, community, culture, and norms" was ranked fourth by all study groups and all participants; "Having confidence with a mentor to help the new teacher feel confident" was ranked fifth by all participants and all study groups except school administrators, who ranked this item seventh; and "Adjusting to the teaching role and dealing with the shift from student-hood to being a full-time teacher" was ranked seventh by all participants and all study groups except school administrators, who ranked this item fifth. Are these differences statistically significant?

The only apparent disjuncts among study groups and all participants, then, were the latter two items ranked differently by school administrators than any other study group or all participants, and "Remaining calm and professional in the face of unnerving situations while learning to quickly recover from mistakes" and "New teachers learning what is expected of them for success," which also were ranked differently by school administrators than any other study group or all participants. However, there are also other slight disjuncts, such as "Focusing on 'survival level' of teacher development"

although all teachers ranked this item eighth and school administrators ranked it ninth. The hypothesis testing and t-test calculations are listed in Appendix L.

The nomenclature used for these calculations is T-TEST L.#.*, where L represents that the calculation is listed in Appendix L, # represents the section of the survey for which the t-test is calculated (1-7), and * is the number of the t-test chronologically for each section of the survey. So, for example, T-TEST L.3.4 is the name of the fourth t-test in the third section of the survey, found in Appendix L.

T-TEST L.1.1

The conclusion is that the rankings of all teacher respondents combined for this survey item, "Focusing on the 'survival level' of teacher development" are **not** statistically significantly different from the rankings of the school administrators with a confidence interval of 95%.

> *A brief glance indicates that although there are differences between and among the various study groups, a determination must be made regarding what constitutes a difference between or among groups. For purposes of this study, it was decided that in most cases, a difference between groups less than two did* ***not*** *constitute a significant difference between the groups. This would make the data analyses less cumbersome than calculating every difference that existed between or among study groups. Further note that for this first section of the survey, there are no items in which any group of teachers differed with any other group of teachers for any survey item; the only differences were between teacher groups and school administrators.*

T-TEST L.1.2

The conclusion is that the rankings of all teacher respondents combined for this survey item, "New teachers learning what is expected of them for success" are **not** statistically significantly different from the rankings of the school administrators with a confidence interval of 95%.

Note that using a confidence interval of 99% would yield a different conclusion. The critical t-value for (df = 100, α = .01, one-tailed) = 2.330, and the critical t-value for (df = 1000, α = .01, one-tailed) = 2.326. Therefore, the critical t-value for (df = 291, α = .05, one-tailed) would lie between 2.330 and 2.326. The t-statistic for these data (2.00096) is less than the critical t-value (some value that lies in the region 2.330 < x < 2.326). This would not fall in the critical region. Therefore, H_0 would be accepted, meaning that there would not be a statistically significant difference between these groups.

A brief glance indicates that although there are differences between and among the various study groups, most of the differences are not at face value extremely different; for example, for five of the seven sections of the survey, every study group and all participants ranked the highest item exactly the same. Therefore, for purposes of this study, it was decided to use a confidence interval of 95% throughout the entire study so that meaningful differences could be analyzed.

T-TEST L.1.3

The conclusion is that the rankings of all teacher respondents combined for this survey item, "Having confidence with a mentor to help the new teacher feel confident"

are **not** statistically significantly different from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.1.4

The conclusion is that the rankings of all teacher respondents combined for this survey item, “Adjusting to the teaching role and dealing with the shift from student-hood to being a full-time teacher” are **not** statistically significantly different from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.1.5

The conclusion is that the rankings of all teacher respondents combined for this survey item, “Remaining calm and professional in the face of unnerving situations while learning to quickly recover from mistakes” are **not** statistically significantly different from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.1.6

The conclusion is that the rankings of all teacher respondents combined for this survey item, “Understanding of cultural and ethnic differences” are **not** statistically significantly different from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.1.7

The conclusion is that the rankings of all untenured teachers and recently tenured teachers combined for this survey item, “Understanding of cultural and ethnic differences” are **not** statistically significantly different from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.1.8

The conclusion is that the rankings of recently tenured teachers combined with veteran teachers for this survey item, "Remaining calm and professional in the face of unnerving situations while learning to quickly recover from mistakes" **are statistically significantly different** from the rankings of the school administrators with a confidence interval of 95%.

- Thus, in the first section of the survey, there was only one item where study groups ranked statistically significantly different from each other with a 95% confidence interval: School administrators ranked "Remaining calm and professional in the face of unnerving situations while learning to quickly recover from mistakes" significantly differently from recently tenured teachers and veteran teachers combined.

Section 2: INTERACTIONS & COMMUNICATION

All participants and each study group except for school administrators agreed that the most important item for this section of the survey was "Providing teachers with co-planning and mentoring time with other teachers and peers;" school administrators differed, ranking this item as third most important in this section. All participants and each study group except for school administrators agreed that the second most important item was "Participating in new teacher study/support/discussion groups dedicated to sharing information about successes and concerns, to effective practice, and to action research;" school administrators ranked this as the most important item in this section. All participants and each study group except for school administrators agreed that the third most important item was "Availability of experienced colleagues who will take new

teachers' daily dilemmas seriously;" school administrators ranked this item fourth. The item that school administrators ranked as the second most important was "Supporting improvement of teaching practice at teachers' individual points of need," differing from all the teacher study groups.

The three least important items were the same for all study groups and all participants, exactly in the same order: "Bus tour of school district" was ranked least important, followed by "New teacher supervision of volunteers and paraprofessionals," then "Clarity about the purpose and intended outcomes of the induction program."

All study groups and all participants, therefore, agreed on the three least important topics in new teacher induction in this category by ranking them in the same order. One other item's ranking was similar for all study groups: "Facing aspects of teaching which were never dealt with or never came up in training" was ranked fifth by all participants and all study groups except veteran teachers, who ranked it fourth. One remaining item's ranking was the most diverse in this category: "Supporting improvement of teaching practice at teachers' individual points of need" was ranked second by school administrators; fourth by all participants, untenured teachers, and recently tenured teachers; and fifth by veteran teachers. Are these differences statistically significant?

The only apparent disjuncts among study groups and all participants, then, were "Providing teachers with co-planning and mentoring time with other teachers and peers" and "Supporting improvement of teaching practice at teachers' individual points of need." The hypothesis testing and t-test are calculated thusly:

T-TEST L.2.1

The conclusion is that the rankings of all teacher participants for this survey item, "Providing new teachers with co-planning and mentoring time with other teachers and peers" **are statistically significantly different** from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.2.2

The conclusion is that the rankings of the all teacher participants for this survey item, "Supporting improvement of teaching practice at teachers' individual points of need" **are statistically significantly different** from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.2.3

The conclusion is that the rankings of the school administrators for this survey item, "Supporting improvement of teaching practice at teachers' individual points of need" **are statistically significantly different** from the rankings of the veteran teachers with a confidence interval of 95%.

- Thus, in the second section of the survey, there were three items where study groups ranked statistically significantly different from each other with a 95% confidence interval. 1) School administrators ranked "Providing new teachers with co-planning and mentoring time with other teachers and peers" significantly differently from all teacher groups. 2) School administrators ranked "Supporting improvement of teaching practice at teachers' individual points of need" significantly differently from all teacher groups. 3) School administrators ranked "Supporting improvement of teaching practice at teachers' individual points of need" significantly differently from veteran teachers.

Section 3: STRUCTURE OF INDUCTION PROGRAM

All participants and each study group agreed that the most important item in this section of the survey was "The new teacher induction program addressing the immediate needs of new teachers." All participants and each study group except for school administrators agreed that the second most important item was "Individual follow-up of induction program by experienced educators so that new teachers learn to use new skills effectively in their classrooms;" school administrators ranked this as the third most important item in this section. There was divergence for the next few ranked items in this section among the different study groups.

"Having a new teacher survey to assess the needs of new teachers" was ranked second most important by school administrators, third in importance by all participants and recently tenured teachers, and fourth in importance by, interestingly, untenured teachers and veteran teachers. "Including well-designed assessment and support components in the induction program" was ranked third by untenured teachers and veteran teachers, fourth by all participants and school administrators, and fifth by recently tenured teachers. The latter two items bear more analysis regarding whether any of these differences were statistically significant.

The two least important items were the same for all study groups and all participants, albeit not in the same order: "The induction program consisting primarily of formal seminars" was ranked least important by all participants, untenured teachers, and recently tenured teachers, and ranked next-to-last in importance by veteran teachers and school administrators. "The new teacher induction program addressing long-term career goals" was ranked least important by veteran teachers and school administrators, and

ranked next-to-last in importance by all participants, untenured teachers, and recently tenured teachers. All study groups ranked "The induction program consisting primarily of informal workshops" as sixth-least important. Finally, all study groups ranked "The new teacher induction program being divided into progressive stages of achievement" as fifth in importance except recently tenured teachers, who ranked this item fourth.

The only apparent disjuncts among study groups and all participants, then, were "Having a new teacher survey to assess needs of new teachers" and "Including well-designed assessment and support components in the induction program." The hypothesis testing and t-test are calculated thusly:

T-TEST L.3.1

The conclusion is that the rankings of the school administrators for this survey item, "Having a new teacher survey to assess needs of new teachers" are **not** statistically significantly different from the rankings of the untenured teachers and veteran teachers combined with a confidence interval of 95%.

T-TEST L.3.2

The conclusion is that the rankings of the recently tenured teachers for this survey item, "Including well-designed assessment and support components in the induction program" are **not** statistically significantly different from the rankings of the untenured teachers and veteran teachers combined with a confidence interval of 95%.

- Thus, in the third section of the survey, there were ***no items*** where study groups ranked statistically significantly different from each other with a 95% confidence interval.

Section 4: PROFESSIONAL & SUPPORT

All participants and each study group agreed that the most important item in this section of the survey was "Mentors to demonstrate teaching methods and to assist with lesson plans for student mastery." Similarly, all participants and each study group agreed that the *least* important item was "Receiving guidance for collecting artifacts for a portfolio." Ranked tenth out of eleven items in importance by all study groups was "Contributing to the school and district and participating in school functions" except for untenured teachers, who ranked this item ninth in importance. Other than these three items, there was divergence for all the other ranked items in this section among the different study groups, all of which contained possible disjuncts among study groups and all participants.

"Time for sustained, school-based professional development and lifelong learning opportunities, including workshops and/or conferences" was ranked second in importance by untenured teachers, recently tenured teachers, and school administrators; third by all participants; and fourth by veteran teachers. "Demonstrating knowledge of content and professional practice while strengthening knowledge and skills" was ranked second by all participants and veteran teachers, third by untenured teachers and recently tenured teachers, and fourth by school administrators. "Administratively-set expectations and norms of teacher conduct, professional responsibilities, appearance, conduct, and identity" was ranked third by veteran teachers, fourth by all participants, fifth by untenured teachers and school administrators, and seventh by recently tenured teachers.

"Setting goals for self-improvement and transferring the acquired knowledge, skills, beliefs, and attitudes needed to succeed" was ranked fourth in importance by

untenured teachers and recently tenured teachers, sixth by all participants and school administrators, and seventh by veteran teachers. "Ongoing informal assessment of professional performance" was ranked third most important by veteran teachers, fourth by all participants, fifth by untenured teachers and school administrators, and seventh by recently tenured teachers. "Have a working knowledge and understanding of teachers' legal liabilities and responsibilities" was ranked fifth by recently tenured teachers, sixth by veteran teachers, seventh by all participants and untenured teachers, and ninth by school administrators.

"Ongoing formal assessment of professional performance" was ranked seventh by school administrators; eighth by all participants, untenured teachers, and veteran teachers; and ninth by recently tenured teachers. Finally, "Learning what it means to be a professional and acquiring a professional vocabulary" was ranked eighth by recently tenured teachers and school administrators, ninth by all participants and veteran teachers, and tenth by untenured teachers. The hypothesis testing and t-test are calculated as follows:

T-TEST L.4.1

The conclusion is that the rankings of the veteran teachers for this survey item, "Time for sustained, school-based professional development and lifelong learning opportunities, including workshops and/or conferences" **are statistically significantly different** from the rankings of the untenured teachers, recently tenured teachers, and school administrators combined with a confidence interval of 95%.

T-TEST L.4.2

The conclusion is that the rankings of the school administrators for this survey item, “Demonstrating knowledge of content and professional practice while strengthening knowledge and skills” are **not** statistically significantly different from the rankings of the veteran teachers with a confidence interval of 95%.

T-TEST L.4.3

The conclusion is that the rankings of the school administrators for this survey item, “Ongoing formal assessment of professional performance” are **not** statistically significantly different from the rankings of the recently tenured teachers with a confidence interval of 95%.

T-TEST L.4.4

The conclusion is that the rankings of the school administrators for this survey item, “Ongoing informal assessment of professional performance” are **not** statistically significantly different from the rankings of the recently tenured teachers and untenured teachers combined with a confidence interval of 95%.

T-TEST L.4.5

The conclusion is that the rankings of the veteran teachers for this survey item, “Administratively-set expectations and norms of teacher conduct, professional responsibilities, appearance, conduct, and identity” are **not** statistically significantly different from the rankings of the untenured teachers and school administrators combined with a confidence interval of 95%.

T-TEST L.4.6

The conclusion is that the rankings of the recently tenured teachers for this survey item, “Administratively-set expectations and norms of teacher conduct, professional responsibilities, appearance, conduct, and identity” are **not** statistically significantly different from the rankings of the untenured teachers and school administrators combined with a confidence interval of 95%.

T-TEST L.4.7

The conclusion is that the rankings of the recently tenured teachers for this survey item, “Administratively-set expectations and norms of teacher conduct, professional responsibilities, appearance, conduct, and identity” are **not** statistically significantly different from the rankings of the veteran teachers with a confidence interval of 95%.

T-TEST L.4.8

The conclusion is that the rankings of the untenured teachers for this survey item, “Learning what it means to be a professional and acquiring a professional vocabulary” are **not** statistically significantly different from the rankings of the recently tenured teachers and school administrators combined with a confidence interval of 95%.

T-TEST L.4.9

The conclusion is that the rankings of the school administrators for this survey item, “Setting goals for self-improvement and transferring the acquired knowledge, skills, beliefs, and attitudes needed to succeed” are **not** statistically significantly different from the rankings of the untenured teachers and recently tenured teachers combined with a confidence interval of 95%.

T-TEST L.4.10

The conclusion is that the rankings of the recently tenured teachers for this survey item, “Have a working knowledge and understanding of teachers’ legal liabilities and responsibilities” are **not** statistically significantly different from the rankings of the untenured teachers with a confidence interval of 95%.

T-TEST L.4.11

The conclusion is that the rankings of the school administrators for this survey item, “Have a working knowledge and understanding of teachers’ legal liabilities and responsibilities” are **not** statistically significantly different from the rankings of the untenured teachers with a confidence interval of 95%.

T-TEST L.4.12

The conclusion is that the rankings of the school administrators for this survey item, “Have a working knowledge and understanding of teachers’ legal liabilities and responsibilities” are **not** statistically significantly different from the rankings of the veteran teachers with a confidence interval of 95%.

T-TEST L.4.13

The conclusion is that the rankings of the school administrators for this survey item, “Have a working knowledge and understanding of teachers’ legal liabilities and responsibilities” are **not** statistically significantly different from the rankings of the recently tenured teachers with a confidence interval of 95%.

- Thus, in the fourth section of the survey, although there were several items where with differing rankings, there was nevertheless only one item where study groups ranked statistically significantly different from each other with a 95% confidence

interval: veteran teachers ranked "Time for sustained, school-based professional development and lifelong learning opportunities, including workshops and/or conferences" significantly differently from untenured teachers, recently tenured teachers, and school administrators combined.

Section 5: OBSERVATIONS & FEEDBACK

All participants and each study group agreed that the two most important items in this section of the survey were "Being observed by and receiving coaching with other experienced teachers and mentors" and "Specific suggestions and feedback from observations about what can be done better," albeit not in the same order for all study groups. The latter item was ranked first in importance by untenured teachers and recently tenured teachers, and second by all participants, veteran teachers, and school administrators. The former item was ranked second in importance by untenured teachers and recently tenured teachers, and first by all participants, veteran teachers, and school administrators.

All study groups ranked "opportunities for classroom visits and observations of other teachers" third except for school administrators, who ranked it fourth in importance. "Demonstration of a model lesson from an expert teacher" was ranked fourth by all participants and untenured teachers, and fifth in importance by recently tenured teachers, veteran teachers, and school administrators.

There was much similarity in the rankings of the above four items in this section of the survey, but there were quite a few disjuncts for the remaining items. "Informal visits and conversations and receiving informal administrative feedback" was ranked

third in importance by school administrators, fourth by recently tenured teachers, fifth by all participants and untenured teachers, and interestingly sixth by veteran teachers. "Mentors to help analyze student work and achievement" was ranked fourth in importance in this section of the survey by veteran teachers, sixth by all participants and recently tenured teachers, seventh by school administrators, and eighth out of nine items by untenured teachers. "Receiving formal written evaluations from an administrator that links teaching to student achievement" was ranked sixth in importance by untenured teachers, seventh by all participants, and eighth by recently tenured teachers, veteran teachers, and school administrators.

"Supervision is distributed throughout the faculty in an organized, consistent, and continuous program" was ranked sixth in importance for this section of the survey by school administrators, seventh by veteran teachers, and least important by all participants, untenured teachers, and recently tenured teachers. The hypothesis testing and t-test are calculated thusly:

T-TEST L.5.1

The conclusion is that the rankings of the untenured teachers and the recently tenured teachers combined for this survey item, "Being observed by the superintendent, principals, and/or other administrators" **are statistically significantly different** from the rankings of the veteran teachers and school administrators combined with a confidence interval of 95%.

T-TEST L.5.2

The conclusion is that the rankings of the untenured teachers for this survey item, "Receiving formal written evaluations from an administrator that links teaching to

student achievement" **are statistically significantly different** from the rankings of the recently tenured teachers, veteran teachers, and school administrators combined with a confidence interval of 95%.

T-TEST L.5.3

The conclusion is that the rankings of the veteran teachers for this survey item, "Mentors to help analyze student work and achievement" are **not** statistically significantly different from the rankings of the recently tenured teachers with a confidence interval of 95%.

T-TEST L.5.4

The conclusion is that the rankings of the veteran teachers for this survey item, "Mentors to help analyze student work and achievement" are **not** statistically significantly different from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.5.5

The conclusion is that the rankings of the veteran teachers for this survey item, "Mentors to help analyze student work and achievement" are **not** statistically significantly different from the rankings of the untenured teachers with a confidence interval of 95%.

T-TEST L.5.6

The conclusion is that the rankings of the veteran teachers for this survey item, "Supervision is distributed throughout the faculty in an organized, consistent, and continuous program" are **not** statistically significantly different from the rankings of the

untenured teachers and recently tenured teachers combined with a confidence interval of 95%.

T-TEST L.5.7

The conclusion is that the rankings of the school administrators for this survey item, “Supervision is distributed throughout the faculty in an organized, consistent, and continuous program” are **not** statistically significantly different from the rankings of the untenured teachers and recently tenured teachers combined with a confidence interval of 95%.

T-TEST L.5.8

The conclusion is that the rankings of the school administrators for this survey item, “Informal visits and conversations and receiving informal administrative feedback” **are statistically significantly different** from the rankings of the untenured teachers with a confidence interval of 95%.

T-TEST L.5.9

The conclusion is that the rankings of the school administrators for this survey item, “Informal visits and conversations and receiving informal administrative feedback” **are statistically significantly different** from the rankings of the veteran teachers with a confidence interval of 95%.

T-TEST L.5.10

The conclusion is that the rankings of the school administrators for this survey item, “Informal visits and conversations and receiving informal administrative feedback” are **not** statistically significantly different from the rankings of the veteran teachers with a confidence interval of 95%.

- Thus, in the fifth section of the survey, there were three items where study groups ranked statistically significantly different from each other with a 95% confidence interval, and one of these items had two sets of groups that differed this way: 1) Untenured teachers and recently tenured teachers combined ranked "Being observed by the superintendent, principals, and/or other administrators" as statistically significantly different from veteran teachers and school administrators combined; 2) Untenured teachers ranked "Receiving formal written evaluations from an administrator that links teaching to student achievement" as statistically significantly different from recently tenured teachers, veteran teachers, and school administrators combined; 3) Veteran teachers ranked "Informal visits and conversations and receiving informal administrative feedback" as statistically significantly different from school administrators; and 4) Untenured teachers ranked "Informal visits and conversations and receiving informal administrative feedback" as statistically significantly different from school administrators.

Section 6: PROCEDURAL & MANAGERIAL

All participants and each study group agreed that the most important item in this section of the survey was "Addressing effective classroom management procedures and routines," and they also all agreed that the second most important item was "Addressing school and district procedures for student discipline, defusing potential discipline problems, and dealing with difficult situations." Furthermore, all participants and each study group agreed that the least important item in this section of the survey was "Providing a plan for substitute teachers." All participants and all study groups agreed

that the next to last item in importance was “Assigning new teachers to smaller classes, reduced workloads, and reduced number of course preparations” except for untenured teachers, who ranked this item ninth in importance.

Though the two most important and the least important item in this section of the survey were agreed upon in exact order by all participants and each study group, and all but one study group agreed on the second-least important item, there was divergence among the study groups for most of the remaining items. “Having a ‘start-of-school” checklist” was ranked third most important in this section of the survey by all participants and untenured teachers, fourth by recently tenured teachers and veteran teachers, but seventh by school administrators. “Maintaining accurate records and documentation” was ranked third by veteran teachers, fourth by all participants and untenured teachers, sixth by school administrators, and eighth by recently tenured teachers. “Effective time management with high student levels of time on task” was ranked third most important by recently tenured teachers and school administrators; but seventh by all participants, untenured teachers, and veteran teachers. “Identifying and dealing with individual students’ needs, interests, abilities, and problems” was ranked fourth in importance by school administrators; fifth by all participants, untenured teachers, and veteran teachers; but seventh by recently tenured teachers.

“Familiarity with locating and obtaining instructional resources and materials” was ranked sixth in importance in this section of the survey by all participants and all study groups except school administrators, who ranked this item fifth in importance. “Movement of students (start and end of a period or day, fire drills, crisis drills, etc.” was ranked eighth in importance by all participants and all study groups except for recently

tenured teachers, who ranked this item ninth in importance. Finally, "Avoiding 'down-time' strategies and set of quick and easy backups for when things don't go as expected" was ranked fifth in importance by recently tenured teachers, but eighth in importance by all participants, ninth by veteran teachers and school administrators, and tenth in importance by untenured teachers. The hypothesis testing and t-test are calculated thusly:

T-TEST L.6.1

The conclusion is that the rankings of the school administrators for this survey item, "Having a 'start-of-school' checklist" are **not** statistically significantly different from the rankings of the untenured teachers with a confidence interval of 95%.

T-TEST L.6.2

The conclusion is that the rankings of the school administrators for this survey item, "Having a 'start-of-school' checklist" are **not** statistically significantly different from the rankings of the untenured teachers and the veteran teachers combined with a confidence interval of 95%.

T-TEST L.6.3

The conclusion is that the rankings of the recently tenured teachers and the school administrators combined for this survey item, "Effective time management with high student levels of time on task" **are statistically significantly different** from the rankings of the untenured teachers and the veteran teachers combined with a confidence interval of 95%.

T-TEST L.6.4

The conclusion is that the rankings of the untenured teachers and veteran teachers combined for this survey item, "Identifying and dealing with individual students' needs,

interests, abilities, and problems" are **not** statistically significantly different from the rankings of the recently tenured teachers with a confidence interval of 95%.

T-TEST L.6.5

The conclusion is that the rankings of the school administrators for this survey item, "Identifying and dealing with individual students' needs, interests, abilities, and problems" are **not** statistically significantly different from the rankings of the recently tenured teachers with a confidence interval of 95%.

T-TEST L.6.6

The conclusion is that the rankings of the veteran teachers and school administrators combined for this survey item, "Avoiding 'down-time' strategies and set of quick and easy backups for when things don't go as expected" **are statistically significantly different** from the rankings of the recently tenured teachers with a confidence interval of 95%.

T-TEST L.6.7

The conclusion is that the rankings of the untenured teachers for this survey item, "Avoiding 'down-time' strategies and set of quick and easy backups for when things don't go as expected" **are statistically significantly different** from the rankings of the recently tenured teachers with a confidence interval of 95%.

T-TEST L.6.8

The conclusion is that the rankings of the school administrators for this survey item, "Maintaining accurate records and documentation" are **not** statistically significantly different from the rankings of the veteran teachers with a confidence interval of 95%.

T-TEST L.6.9

The conclusion is that the rankings of the recently tenured teachers for this survey item, "Maintaining accurate records and documentation" **are statistically significantly different** from the rankings of the veteran teachers with a confidence interval of 95%.

T-TEST L.6.10

The conclusion is that the rankings of the school administrators for this survey item, "Maintaining accurate records and documentation" are **not** statistically significantly different from the rankings of the untenured teachers with a confidence interval of 95%.

T-TEST L.6.11

The conclusion is that the rankings of the recently tenured teachers for this survey item, "Maintaining accurate records and documentation" are **not** statistically significantly different from the rankings of the untenured teachers with a confidence interval of 95%.

T-TEST L.6.12

The conclusion is that the rankings of the school administrators for this survey item, "Maintaining accurate records and documentation" are **not** statistically significantly different from the rankings of the recently tenured teachers with a confidence interval of 95%.

- Thus, in the sixth section of the survey, there were three items where study groups ranked statistically significantly different from each other with a 95% confidence interval, and one of these items had two sets of groups that differed this way: 1) Recently tenured teachers and school administrators ranked "Effective time management with high student levels of time on task" as statistically significantly different from untenured teachers and veteran teachers; 2) Recently tenured teachers ranked

"Maintaining accurate records and documentation" as statistically significantly different from veteran teachers; 3) Recently tenured teachers ranked "Avoiding 'down-time' strategies and set of quick and easy backups for when things don't go as expected" as statistically significantly different from veteran teachers and school administrators; and 4) Recently tenured teachers ranked "Avoiding 'down-time' strategies and set of quick and easy backups for when things don't go as expected" as statistically significantly different from untenured teachers.

Section 7: INSTRUCTIONAL

All participants and each study group agreed that the most important item in this section of the survey was "Using effective instructional practices, strategies, and techniques, and selecting instructional goals." All participants and each study group agreed that the second most important item was "Knowledge of teaching resources, subject/curriculum, pedagogical content, and ways of teaching specific subject matter" except for untenured teachers, who ranked this item fourth. Furthermore, all participants and each study group agreed that the least important item in this section of the survey was "Integration and use of technology," and that the second least important item was "Planning, organizing, and managing instruction and physical space."

Though the most important and the two least important items in this section of the survey were agreed upon in exact order by all participants and each study group, and all but one study group agreed on the second-most important item, there was divergence among the study groups for most of the remaining items – in some cases, quite a bit. For example, "Encouraging active student participation, using appropriate and varied

questioning and discussion techniques and incorporating pupil ideas" was ranked as the third most important in this section of the survey by veteran teachers, fourth by all participants, fifth by untenured teachers, seventh by recently tenured teachers, and tenth by school administrators. "Engaging students in critical thinking, probing for knowledge, and providing feedback to students" was ranked third in importance by school administrators and untenured teachers, fifth by all participants and recently tenured teachers, and seventh by veteran teachers. "Relating lessons to real life, ensuring that students are aware of the substance and purpose of what they are being asked to do" was ranked second most important by untenured teachers, third by all participants and recently tenured teachers, fifth by school administrators, and sixth by veteran teachers.

"Analyzing and understanding a range of teaching and learning styles" was ranked as fourth most important in this section of the survey by recently tenured teachers and school administrators, seventh by all participants and untenured teachers, yet nonth by veteran teachers. "Setting clear targets and expectations for students' learning and achievement while linking performance to high standards" was ranked fourth most important by veteran teachers, sixth by all participants, seventh by school administrators, eighth by untenured teachers, but tenth by recently tenured teachers. "Maximizing academic learning time and designing and planning coherent instruction with lesson clarity and instructional variety" was ranked fifth in importance by veteran teachers, eighth by all participants and school administrators, and ninth by untenured teachers and recently tenured teachers. "Addressing a variety of student evaluation processes using student assessment data to improve instruction" was ranked as sixth in importance in this section of the survey by untenured teachers, recently tenured teachers, and school

administrators; eighth by veteran teachers; and ninth by all participants. Finally, "Special education issues" was ranked eighth in importance by recently tenured teachers; ninth by school administrators; and tenth by all participants, untenured teachers, and veteran teachers. The hypothesis testing and t-test are calculated thusly:

T-TEST L.7.1

The conclusion is that the rankings of the untenured teachers for this survey item, "Knowledge of teaching resources, subject/curriculum, pedagogical content, and ways of teaching specific subject matter" **are statistically significantly different** from the rankings of the recently tenured teachers, veteran teachers, and school administrators combined with a confidence interval of 95%.

T-TEST L.7.2

The conclusion is that the rankings of the untenured teachers for this survey item, "Analyzing and understanding a range of teaching and learning styles" are **not** statistically significantly different from the rankings of the recently tenured teachers, and school administrators combined with a confidence interval of 95%.

T-TEST L.7.3

The conclusion is that the rankings of the veteran teachers for this survey item, "Analyzing and understanding a range of teaching and learning styles" are **not** statistically significantly different from the rankings of the recently tenured teachers, and school administrators combined with a confidence interval of 95%.

T-TEST L.7.4

The conclusion is that the rankings of the veteran teachers for this survey item, "Addressing a variety of student evaluation processes using student assessment data to

improve instruction" are **not** statistically significantly different from the rankings of the untenured teachers, recently tenured teachers, and school administrators combined with a confidence interval of 95%.

T-TEST L.7.5

The conclusion is that the rankings of the untenured teachers for this survey item, "Relating lessons to real life, ensuring that students are aware of the substance and purpose of what they are being asked to do" are **not** statistically significantly different from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.7.6

The conclusion is that the rankings of the untenured teachers for this survey item, "Relating lessons to real life, ensuring that students are aware of the substance and purpose of what they are being asked to do" are **not** statistically significantly different from the rankings of the veteran teachers with a confidence interval of 95%.

T-TEST L.7.7

The conclusion is that the rankings of the recently tenured teachers for this survey item, "Relating lessons to real life, ensuring that students are aware of the substance and purpose of what they are being asked to do" **are statistically significantly different** from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.7.8

The conclusion is that the rankings of the recently tenured teachers for this survey item, "Relating lessons to real life, ensuring that students are aware of the substance and purpose of what they are being asked to do" **are statistically significantly different** from the rankings of the veteran teachers with a confidence interval of 95%.

T-TEST L.7.9

The conclusion is that the rankings of the untenured teachers for this survey item, "Encouraging active student participation, using appropriate and varied questioning and discussion techniques, and incorporating pupil ideas" are **not** statistically significantly different from the rankings of the veteran teachers with a confidence interval of 95%.

T-TEST L.7.10

The conclusion is that the rankings of the recently tenured teachers for this survey item, "Encouraging active student participation, using appropriate and varied questioning and discussion techniques, and incorporating pupil ideas" **are statistically significantly different** from the rankings of the veteran teachers with a confidence interval of 95%.

T-TEST L.7.11

The conclusion is that the rankings of the school administrators for this survey item, "Encouraging active student participation, using appropriate and varied questioning and discussion techniques, and incorporating pupil ideas" **are statistically significantly different** from the rankings of the veteran teachers with a confidence interval of 95%.

T-TEST L.7.12

The conclusion is that the rankings of the untenured teachers for this survey item, "Encouraging active student participation, using appropriate and varied questioning and discussion techniques, and incorporating pupil ideas" are **not** statistically significantly different from the rankings of the recently tenured teachers with a confidence interval of 95%.

T-TEST L.7.13

The conclusion is that the rankings of the untenured teachers for this survey item, "Encouraging active student participation, using appropriate and varied questioning and discussion techniques, and incorporating pupil ideas" **are statistically significantly different** from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.7.14

The conclusion is that the rankings of the recently tenured teachers for this survey item, "Encouraging active student participation, using appropriate and varied questioning and discussion techniques, and incorporating pupil ideas" are **not** statistically significantly different from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.7.15

The conclusion is that the rankings of the recently tenured teachers for this survey item, "Special education issues" are **not** statistically significantly different from the rankings of the untenured teachers and veteran teachers combined with a confidence interval of 95%.

T-TEST L.7.16

The conclusion is that the rankings of the recently tenured teachers for this survey item, "Engaging students in critical thinking, probing for knowledge, and providing feedback to students" are **not** statistically significantly different from the rankings of the untenured teachers and school administrators combined with a confidence interval of 95%.

T-TEST L.7.17

The conclusion is that the rankings of the recently tenured teachers for this survey item, “Engaging students in critical thinking, probing for knowledge, and providing feedback to students” are **not** statistically significantly different from the rankings of the veteran teachers with a confidence interval of 95%.

T-TEST L.7.18

The conclusion is that the rankings of the veteran teachers for this survey item, “Engaging students in critical thinking, probing for knowledge, and providing feedback to students” are **not** statistically significantly different from the rankings of the untenured teachers and school administrators combined with a confidence interval of 95%.

T-TEST L.7.19

The conclusion is that the rankings of the veteran teachers for this survey item, “Setting clear targets and expectations for students’ learning and achievement while linking performance to high standards” are **not** statistically significantly different from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.7.20

The conclusion is that the rankings of the veteran teachers for this survey item, “Setting clear targets and expectations for students’ learning and achievement while linking performance to high standards” are **not** statistically significantly different from the rankings of the untenured teachers with a confidence interval of 95%.

T-TEST L.7.21

The conclusion is that the rankings of the veteran teachers for this survey item, “Setting clear targets and expectations for students’ learning and achievement while

linking performance to high standards" **are statistically significantly different** from the rankings of the recently tenured teachers with a confidence interval of 95%.

T-TEST L.7.22

The conclusion is that the rankings of the school administrators for this survey item, "Setting clear targets and expectations for students' learning and achievement while linking performance to high standards" are **not** statistically significantly different from the rankings of the recently tenured teachers with a confidence interval of 95%.

T-TEST L.7.23

The conclusion is that the rankings of the untenured teachers for this survey item, "Setting clear targets and expectations for students' learning and achievement while linking performance to high standards" are **not** statistically significantly different from the rankings of the recently tenured teachers with a confidence interval of 95%.

T-TEST L.7.24

The conclusion is that the rankings of the veteran teachers for this survey item, "Maximizing academic learning time and designing and planning coherent instruction with lesson clarity and instructional variety" are **not** statistically significantly different from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.7.25

The conclusion is that the rankings of the veteran teachers for this survey item, "Maximizing academic learning time and designing and planning coherent instruction with lesson clarity and instructional variety" are **not** statistically significantly different from the rankings of the untenured teachers and recently tenured teachers combined with a confidence interval of 95%.

• Thus, in the seventh and final section of the survey, there were four items where study groups ranked statistically significantly different from each other with a 95% confidence interval. One of these items had two sets of groups that differed this way, and another item had three sets of groups that differed this way as well: 1) Untenured teachers ranked "Knowledge of teaching resources, subject/curriculum, pedagogical content, and ways of teaching specific content matter" as statistically significantly different from recently tenured teachers, veteran teachers, and school administrators; 2) Recently tenured teachers ranked "Setting clear targets and expectations for students' learning and achievement while linking performance to high standards" as statistically significantly different from veteran teachers; 3) Recently tenured teachers ranked "Relating lessons to real life, ensuring that students are aware of the substance and purpose of what they are being asked to do" as statistically significantly different from veteran teachers; 4) Recently tenured teachers ranked "Relating lessons to real life, ensuring that students are aware of the substance and purpose of what they are being asked to do" as statistically significantly different from school administrators; 5) Veteran teachers ranked "Encouraging active student participation, using appropriate and varied questioning and discussion techniques and incorporating pupil ideas" as statistically significantly different from recently tenured teachers; 6) Veteran teachers ranked "Encouraging active student participation, using appropriate and varied questioning and discussion techniques and incorporating pupil ideas" as statistically significantly different from school administrators; and 7) Untenured teachers ranked "Encouraging active student participation, using appropriate and varied questioning and discussion techniques

and incorporating pupil ideas" as statistically significantly different from school administrators.

DATA ANALYSIS OF ALL PARTICIPANTS AND OF EACH INDIVIDUAL STUDY GROUP: SUMMARY

The purpose of this study was to compare and contrast the professional needs as reported by nontenured, recently tenured, and veteran teachers from their perspective vs. the perspective of administrators. What do different educational stakeholders (new untenured teachers, newly tenured teachers, veteran teachers, and school administrators) each think is important in new teacher induction, and what are the similarities and differences among these groups' opinions?

The former analysis of data showed for which items of the survey there were statistically significant differences between study groups. Also included were narrative explanations of every survey item, explaining for which items there were similarities (or exact results) or differences (significant or not) between various study groups and permutations thereof. These similarities and differences shall be discussed and synthesized in the next chapter, but a summary of those survey items in which there were statistically significant differences between study groups (with a 95% confidence interval) is as follows:

Section I: PSYCHOLOGICAL & CULTURAL

- "Remaining calm and professional in the face of unnerving situations while learning to quickly recover from mistakes":

Significantly more important	Significantly less important
Recently tenured teachers and veteran teachers	School administrators

Section II: INTERACTIONS & COMMUNICATION

- "Providing new teachers with co-planning and mentoring time with other teachers and peers":

Significantly more important	Significantly less important
All teacher groups combined	School administrators

- "Supporting improvement of teaching practice at teachers' individual points of need":

Significantly more important	Significantly less important
School administrators	All teacher groups combined
School administrators	Veteran teachers

Section III: STRUCTURE OF INDUCTION PROGRAM

There were no items where study groups ranked statistically significantly different.

Section IV: PROFESSIONAL & SUPPORT

- "Time for sustained, school-based professional development and lifelong learning opportunities, including workshops and/or conferences":

Significantly more important	Significantly less important
Untenured teachers, recently tenured teachers, and school administrators combined.	Veteran teachers

Section V: OBSERVATIONS & FEEDBACK

- "Being observed by the superintendent, principals, and/or other administrators":

Significantly more important	Significantly less important
Untenured teachers and recently tenured teachers combined	Veteran teachers and school administrators combined

- "Receiving formal written evaluations from an administrator that links teaching to student achievement":

Significantly more important	Significantly less important
Untenured teachers	Recently tenured teachers, veteran teachers, and school administrators combined

- "Informal visits and conversations and receiving informal administrative feedback":

Significantly more important	Significantly less important
School administrators	Veteran teachers
School administrators	Untenured teachers

Section VI: PROCEDURAL & MANAGERIAL

- "Effective time management with high student levels of time on task":

Significantly more important	Significantly less important
Recently tenured teachers and school administrators	Untenured teachers and veteran teachers

- "Maintaining accurate records and documentation":

Significantly more important	Significantly less important
Veteran teachers	Recently tenured teachers

- "Avoiding 'down-time' strategies and set of quick and easy backups for when things don't go as expected":

Significantly more important	Significantly less important
Recently tenured teachers	Veteran teachers and school administrators
Recently tenured teachers	Untenured teachers

Section VII: INSTRUCTIONAL

- "Knowledge of teaching resources, subject/curriculum, pedagogical content, and ways of teaching specific content matter":

Significantly more important	Significantly less important
Recently tenured teachers, veteran teachers, and school administrators	Untenured teachers

• "Setting clear targets and expectations for students' learning and achievement while linking performance to high standards":

Significantly more important	Significantly less important
Veteran teachers	Recently tenured teachers

• "Relating lessons to real life, ensuring that students are aware of the substance and purpose of what they are being asked to do":

Significantly more important	Significantly less important
Recently tenured teachers	Veteran teachers
Recently tenured teachers	School administrators

• "Encouraging active student participation, using appropriate and varied questioning and discussion techniques and incorporating pupil ideas":

Significantly more important	Significantly less important
Veteran teachers	Recently tenured teachers
Veteran teachers	School administrators
Untenured teachers	School administrators

These data may help to answer the research questions as set forth in this study:

♦ What aspects of new teacher induction do new untenured teachers think are most important?

♦ What aspects of new teacher induction do newly tenured teachers think are most important?

♦ What aspects of new teacher induction do veteran teachers think are most important?

♦ What aspects of new teacher induction do school administrators think are most important?

♦ What similarities exist between and among what these varied groups of educators think are most important in new teacher induction?

♦ What differences exist between and among what these varied groups of educators think are most important in new teacher induction?

♦ Why do these similarities and differences exist?

Chapter V CONCLUSIONS

This chapter contains conclusions gleaned from the study by synthesizing the findings of the data analysis. The limitations of the study are first described, followed by a discussion of conclusions drawn from the data from each section of the survey. The chapter concludes with a further discussion of remaining aspects of the study that were not expected, as well as future implications from this study.

LIMITATIONS OF STUDY

Although some items in the survey may have ranked as unimportant, this does not imply that the item itself is unimportant for teachers – rather, it implies that the survey participants ranked the item as less important than the others *in new teacher induction programs*. That said, perhaps the length of the survey itself rendered some of the results as less valid than would other wise be acceptable. The simplest explanation of this is that the number of participants participating in the survey did not equal the number of participants who completed the survey. Two hundred ninety-five (295) participants completed the first section of the survey, but this number decreased for every section of the survey, and only one hundred seventy-seven (177) completed the last section. This was a phenomenon that occurred as a result of crafting the survey to be disseminated online; the survey had to be completed sequentially, which means that if a survey participant did not complete a section, he or she could not proceed to a subsequent section, so it is logical that the number of participants completing each section decreased throughout the sections of the survey.

Not all study groups that were analyzed consisted of at least thirty participants, particularly the school administrators, the maximum of whom answered any section of the survey was twenty-four (24). For the calculation of a t-statistic, the inference is that for any sample size of at least thirty, the population emulates the normal curve for a studied measure, and the number of school administrators was less than thirty. This diminished the validity of the study, since it cannot be automatically assumed that the data for less than thirty participants emulates a normal curve. However, this was a relatively small-scale study, consisting of data gathered from three counties in Southwestern Pennsylvania, so the validity of the study is adequate.

Finally, the survey was crafted from several dozens of items gleaned from much of the literature regarding new teacher induction. As has been delineated, these items were edited and condensed through several iterations before the final survey was completed. As such, the lengths of each item varied for each section of the survey. This was not necessarily atypical of surveys, but perhaps some of the items would have been ranked differently if they had been separated into smaller, more specific items. For example, "Adjusting to the teaching role and dealing with the shift from student-hood to being a full-time teacher" could have easily been split into two items, "Adjusting to the teaching role" and "Dealing with the shift from student-hood to being a full-time teacher." Some other items could have been split into several shorter, more specific items in the survey. "Knowledge of teaching resources, subject/curriculum, pedagogical content, and ways of teaching specific subject matter" could reasonably have been split into four different items, making that section of the survey contain many more items than it did.

However, editing the survey into more items had to be balanced with not making the survey too cumbersome to complete in a time frame that most participants would be willing to do. It likely would have been cumbersome for participants, for example, to rank twenty items in order of importance. Twenty facets on new teacher induction ranked in order of importance would take some time for comprehension of the items and to reflect on their relative importance to one another, and it would be unreasonable to expect anonymous volunteers taking the survey to do this, much less for six or seven sections of survey. Therefore, the survey was crafted as has been delineated, and the overall results will hopefully help school districts in Southwestern Pennsylvania (and perhaps beyond) to improve new teacher induction programs so that new teachers are trained and retained, with students being the chief beneficiaries.

Data Synthesis

The results of the data analysis yielded some interesting and rich results. The statement of the problem for this study was: What do different educational stakeholders (new untenured teachers, newly tenured teachers, veteran teachers, and school administrators) each think is important in new teacher induction, and what are the similarities and differences among these groups' opinions? In particular, the research questions that comprise this problem statement could now be answered based upon the results of the survey: ♦ What aspects of new teacher induction do new untenured teachers think are most important? ♦ What aspects of new teacher induction do newly tenured teachers think are most important? ♦ What aspects of new teacher induction do veteran teachers think are most important? ♦ What aspects of new teacher induction do

school administrators think are most important? ♦ What similarities exist between and among what these varied groups of educators think are most important in new teacher induction?

For all but two sections of the survey, there was unanimous consent among every study group (untenured teachers, recently tenured teachers, veteran teachers, and school administrators, as well as all of the participants combined):

Psychological & Cultural: Maintaining a positive attitude, experiencing and building on successes, and receiving emotional support.

Structure of Induction Program: The new teacher induction program addressing the immediate needs of new teachers.

Professional & Support: Mentors to demonstrate teaching methods and to assist with lesson plans for student mastery.

Procedural & Managerial: Addressing effective classroom management procedures and routines.

Instructional: Using effective instructional practices, strategies, and techniques, and selecting instructional goals.

For one of the two remaining sections of the survey, there was unanimous consent among every study group (untenured teachers, recently tenured teachers, and veteran teachers as well as all of the participants combined) except for school administrators:

Interactions & Communication: Providing new teachers with co-planning and mentoring time with other teachers and peers.

School administrators ranked the latter item as third most important in this section of the survey, and this difference was statistically significant. School administrators ranked "Participating in new teacher study/support/discussion groups dedicated to sharing information about successes and concerns, to effective practice, and to action research" as the most important item in this section.

For the remaining section of the survey, there was unanimous consent among every study group (untenured teachers, recently tenured teachers, veteran teachers, and school administrators as well as all of the participants combined) on the two most important items, albeit in a different order:

Observations & Feedback: Being observed by and receiving coaching with other experienced teachers and mentors. – *most important by all participants, veteran teachers, and school administrators*

Observations & Feedback: Specific suggestions and feedback from observations about what can be done better. – *most important by untenured teachers and recently tenured teachers*

Therefore, all study groups ranked the most important item in most sections of the survey exactly the same. The statistical significance of the difference in importance for the most important item in the "Interactions & Communication" section shall be examined more closely. The remaining research questions are: ♦ What similarities exist between and among what these varied groups of educators think are most important in new teacher induction? ♦ What differences exist between and among what these varied groups of educators think are most important in new teacher induction? ♦ Why do these

similarities and differences exist? To examine these questions more closely, each section of the survey had to be explored more closely.

Section I: PSYCHOLOGICAL & CULTURAL

All participants and each study group agreed that the most important item in this section was "Maintaining a positive attitude, experiencing and building on successes, and receiving emotional support." This item was prevalent in the literature, appearing in several sources. This item focuses on several positive aspects that new teachers can utilize at the beginning and throughout their careers, and it focuses on personal needs in an affective manner for new teachers. The second-most important item differed among study groups: "High expectations of what pupils can achieve to establish a culture for learning and student motivation" was ranked second in importance by all participants combined, as well as by untenured teachers and school administrators; it was ranked third by recently tenured teachers and veteran teachers. For recently tenured teachers and veteran teachers, "Remaining calm and professional in the face of unnerving situations while learning to quickly recover from mistakes" was the second-most important item in this section of the survey, and it was ranked third by all participants combined and by untenured teachers. The conjecture is that new teachers maintain the idealism that all students can achieve highly and can be motivated to learn, and school administrators share this belief as part of their responsibility as educational leaders. However, even experienced teachers rated this item as a priority as well. Since experienced teachers ranked the item dealing with unnerving situations and mistake recovery higher, the conjecture is that new teachers believe that high expectations of students supersedes the

need to learn to recover from mistakes and the unknown. This is logical, given that new teachers have faced less of the unknown based on less time in the classroom than teachers with experience, and new teachers should exude the confidence to handle all situations if they want to become seasoned professionals.

Interestingly, school administrators ranked "Remaining calm and professional in the face of unnerving situations while learning to quickly recover from mistakes" as only sixth-most important, differing significantly from recently teachers and veteran teachers. School administrators are expected to remain calm and professional in all situations, and remaining calm, in control, and professional are all earmarks of good leadership skills. Perhaps school administrators, expected to exude this behavior constantly, are less likely to remember some of the difficulties that new teachers may have regarding unnerving situations and recovering from mistakes. Learning to speak in public, for example, is a talent that is cultivated by speaking in front of other people and gaining experience from this. Similarly, standing in front of students alone for the first time is usually a daunting experience that is done more easily over time after gaining the experience of having done it repetitively. This type of daunting experience can be exacerbated with unnerving situations (e.g. a student unexpectedly making a derogatory comment, the teacher making a mistake in the lesson, etc.). School administrators ranked this item as significantly less important than recently tenured teachers and veteran teachers combined, indicating that perhaps they need to remember that inexperience is part of teaching that needs more attention.

All participants and each study group agreed that "The new teacher becoming acculturated and oriented to school system, building, community, culture, and norms"

was the fourth-most important item in this section of the survey. It was not ranked as one of the three most important items, but it was ranked as more important than most other items. An interesting juxtaposition of rankings occurred with the next few ranked items in this section. In fact, all participants, untenured teachers, recently teachers, and veteran teachers all ranked the fourth- through eighth-most important items exactly the same while school administrators differed on all of the same items. Ranked fifth by all participants and each teacher group was "Having confidence with a mentor to help the new teacher feel confident," which was ranked seventh by school administrators. Conversely, ranked seventh by all participants and by each teacher group was "Adjusting to the teaching role and dealing with the shift from student-hood to being a full-time teacher," which was ranked fifth by school administrators. Although none of these differences were statistically significant, it was interesting that teachers believed having confidence with a mentor – presumably another teacher, perhaps a master teacher – was more important than the new teacher learning to adjust to the teaching role. School administrators oppositely believed that new teachers adjusting to the teaching role, which is done on a more personal level, was more important in new teacher induction programs than having confidence with a mentor, or utilizing an expert to help become a better teacher.

"New teachers learning what is expected of them for success" was ranked sixth-most important by all participants and by each teacher group, but it was ranked as third-most important by school administrators. It was curious that the most important item in this section of the survey included "experiencing and building on successes," yet learning the expectations that new teachers face regarding success was ranked much lower by

each teacher group. However, the wording of these items is quite different for the connotation of success, and the aforementioned item refers to something new teachers would need to learn. School administrators, however, ranked this same item as third in importance, although not as significantly different from the teacher groups. The concept of new teachers learning what is expected of them for success was much more important to school administrators than to teachers, perhaps referring to the concept of new teachers having to determine what their supervisors expect from them to become successful teachers.

Finally, the three least important items in this section of the survey were universally ranked as such by all participants and by all study groups, albeit in a bit of a different order. Not surprisingly, ranked least in importance by all participants, veteran teachers, and school administrators was "Dealing with fatigue," part of almost every occupation; this was ranked next-to-last in importance by untenured teachers and recently tenured teachers. Ranked last in importance by untenured teachers and recently tenured teachers was "Understanding of cultural and ethnic differences," which was also ranked second-to-last by all participants and veteran teachers, and third-to-last by school administrators. Although educators must be able to understand cultural and ethnic differences – as well as special needs, learning disabilities, economic differences, etc. – perhaps the participants of this survey felt that this was not necessary to be an area of focus for new teacher induction. Indeed, teacher preparation courses now contain much information about how to differentiate instruction, focusing on individual student strengths and weaknesses; cultural and ethnic differences are but a subset of this. All participants and each teacher group ranked "Focusing on the 'survival level' of teacher

development" as third-least in importance in this section of the survey, and school administrators ranked this as next-to-last in importance. This concept appeared in much of the literature, but perhaps the wording of "survival level," taken directly from some of the literature (Wong & Wong, 2001), carries a negative connotation that caused the participants of the survey to rank this item lower.

In summary, for the "Psychological & Cultural" section of the survey, all participants and each study group were unanimous in which item was most important and which three items were of the least importance. Most of the rest of the rankings were exactly the same or similar for all participants and each teacher group, but there were several differences in how the school administrators ranked the same items.

Section II: INTERACTIONS & COMMUNICATION

All participants and each teacher group agreed that the most important item in this section was "Providing new teachers with co-planning and mentoring time with other teachers and peers," but there was a statistically significant difference for school administrators, who ranked this item only as third in importance for this section of the survey. In fact, there were three statistically significant differences between school administrators and different teacher groups in this section of the survey, but between no other groups. All participants combined, untenured teachers, and recently tenured teachers all ranked all items in exactly the same order for this section of the survey; the rankings for these study groups were, from most to least important: "Providing new teachers with co-planning and mentoring time with other teachers and peers," "Participating in new teacher study/support/discussion groups dedicated to sharing

information about successes and concerns, to effective practice, and to action research," "Availability of experienced colleagues who will take new teachers' daily dilemmas seriously," "Supporting improvement of teaching practice at teachers' individual points of need," "Facing aspects of teaching which were never dealt with or never came up in training," "Clarity about the purpose and intended outcomes of the induction program," "New teacher supervision of volunteers and professionals," and "Bus tour of school district." The veteran teachers also ranked these same in the exact same order except for the fourth and fifth most important items, which were switched.

Therefore, each teacher group ranked items regarding interaction and communication nearly exactly the same, but school administrators differed on many of the most important items. However, all participants and every study group, including school administrators, agreed exactly on the order of the three least important items, "Clarity about the purpose and intended outcomes of the induction program," "New teacher supervision of volunteers and professionals," and "Bus tour of school district." Interactions and communication dealing with other teachers and educators ranked as most important for all study groups, and interactions and communication dealing with non-educational entities ranked as least important. The least important item, "Bus tour of school district," deals with new teachers seeing or touring other school in the district and presumably the surrounding community. The next least important item implies that how new teachers learn to interact and communicate with paraprofessionals and volunteers as not particularly important in new teacher induction. This is interesting, because educators understand the importance of good relationships with support staff for a school to run effectively. Delineating the purpose and outcome of the induction program was

not ranked as very important either, although teachers are expected to delineate the purpose and outcomes of their lessons to their students on a daily basis.

Interacting with colleagues and peers was the theme of the items ranked as most important in this section of the survey. Having co-planning and mentoring time with other teachers, participating in study/support/discussion groups and availability of experienced colleagues were ranked as the three most important items by all participants and by each teacher group, and these three items were all ranked in the top half of all the items for school administrators. However, for the four most important items in this section, school administrators ranked all of them differently than the other study groups, and for two of these items, those differences were statistically significant.

As stated previously, school administrators ranked "Providing new teachers with co-planning and mentoring time with other teachers and peers" as only third most important, while all participants and every teacher study group ranked this item as most important. Furthermore, this difference was statistically significant with a 95% confidence interval, as school administrators ranked this as less important than all participants and all teacher study groups. School administrators rather ranked "Participating in new teacher study/support/discussion groups dedicated to sharing information about successes and concerns, to effective practice, and to action research" as the most important item in this section, although not statistically significantly different from any or all teacher groups. Since these two items of the survey are similar, the implication is that school administrators are interpreting co-planning time and mentoring as scheduling issues during the regular school day, and this is less important to school administrators than having study/support/discussion groups, which typically take place

outside the confines of the regular school day, thus taking some responsibility of this task off of school administrators. Teacher groups, on the other hand, did not delineate as much of a difference between these two items. For teachers, both of these items were the most important for new teacher induction programs, but school administrators believed that adjusting the schedule of teachers during the regular school day would make one the former item more important and the latter less important.

Conversely, school administrators ranked "Supporting improvement of teaching practice at teachers' individual points of need" as statistically significantly more important than all teachers combined, who ranked this item as fourth in importance, as well as statistically significantly different from veteran teachers, who ranked this item as fifth in importance. It would be difficult for any experienced teachers to observe new teachers on any regular basis without them having the observations as part of their daily schedule. Observing new teachers (as well as experienced teachers), however, is an essential component of instructional duties, especially for principals. Typically, school administrators have much more experience with this than any teachers, and training often takes place as to what should be observed during classroom observations. School administrators, therefore, are more equipped to identify teachers' individual points of need and to react to them. Experienced teachers are usually more reticent to critique other teachers, even untenured, due to possible scrutiny from other teachers or their bargaining unit. It is not that unusual, then, that this statistically significant difference exists between school administrators and teacher study groups.

In summary, for the "Interactions & Communication" section of the survey, all participants and each teacher study group were unanimous in the rankings of all the

items, except for the fourth-and fifth-ranked items, in which veteran teachers ranked them oppositely. All participants and every study group agreed unanimously and exactly for the three least important items. School administrators differed in most of the other items, and differed significantly statistically on two items with various study groups of teachers.

Section III: STRUCTURE OF INDUCTION PROGRAM

There were no items in this section of the survey where any combination of study groups differed significantly statistically from any other study groups. In fact, for each item of this section, the largest difference in rankings between any two study groups was two, but again, none statistically significant. Therefore, in this section of the survey, there were the most similar rankings among all permutations of the study groups. In fact, all participants and each study groups agreed that the most important item in this section was "The new teacher induction program addressing the immediate needs of new teachers." It is not a coincidence, then, that "The new teacher induction program addressing long-term career goals" was ranked as least important by veteran teachers and school administrators, and second-to-least important by all participants, untenured teachers, and recently tenured teachers.

"Having a new teacher survey to assess needs of new teachers" and " Including well-designed assessment and support components in the induction program" were the only two items in this section of the survey in which there were any study groups that ranked them differently by two places. For the former, school administrators ranked second, all participants and recently tenured teachers ranked third, and untenured teachers and veteran teachers ranked fourth in importance; for the latter, untenured teachers and

veteran teachers ranked third, all participants and school administrators ranked fourth, and recently tenured teachers ranked fifth in importance. Although there were some minor differences for these items, the rankings were quite similar.

Ranked fifth by all study groups was "The new teacher induction program being divided into progressive stages of achievement" except for recently tenured teachers, who ranked this item as fourth in importance. The three least important items ranked in this section were "The induction program consisting primarily of informal workshops," "The induction program consisting primarily of formal seminars," and as stated previously, "The new teacher induction program addressing long-term career goals."

In summary, for the "Structure of Induction Program" section of the survey, there were no survey items in which any study groups differed statistically significantly from any other study groups. The items that related to the content of what is in the induction program (i.e. addressing the needs of new teachers, individual follow-up by experienced educators, new teacher survey) ranked as the most important, while items related to structure in the scheduling sense (i.e. formal seminars, informal workshops) were ranked as the least important. This section of the survey had the most similarity and least difference between and among all study groups.

Section IV: PROFESSIONAL & SUPPORT

All participants and each teacher group agreed that the most important item in this section was "Mentors to demonstrate teaching methods and to assist with lesson plans for student mastery." However, there was not unanimity between and among study groups regarding the next most important items, although only one item had a statistically

significant difference between study groups. "Demonstrating knowledge of content and professional practice while strengthening knowledge and skills" was ranked second in importance by all participants and veteran teachers, but third by untenured teachers and recently tenured teachers, and fourth in importance by school administrators, but the difference was not statistically significant. "Time for sustained, school-based professional development and lifelong learning opportunities, including workshops and/or conferences" was ranked second by untenured teachers, recently tenured teachers, and school administrators, third by all participants, but fourth by veteran teachers. Untenured teachers, recently tenured teachers, and school administrators combined ranked this item statistically significantly more important than veteran teachers. According to this result, veteran teachers see less importance in professional development, workshops, and conferences than do school administrators and the more inexperienced teachers. One cannot assume that veteran teachers, through their years of experience, believe that these opportunities are not important; indeed, they did rank this as fourth in importance in this section. However, the other study groups ranked this item as second in importance. Given that this was the fourth section of the survey, and re-reading this survey item, it is possible that some of these survey items were ranked not in terms of what is important regarding new teacher induction. Veteran teachers who have worked through dozens and dozens of professional development days would likely think this would be less important than teachers who have not had the same number of opportunities. Furthermore, school administrators are responsible for professional development in school districts, and those days typically are days in which the atmosphere is more collegial and less regimented than when students are there. It is not

unlikely, then, that veteran teachers ranked this item significantly less important than the other study groups.

"Ongoing informal assessment of professional performance" was ranked as third in importance in this section of the survey by school administrators, but fifth by all participants and veteran teachers, and sixth by untenured teachers and recently tenured teachers; none of these differences were statistically significant. Of note is that the related item, "Ongoing formal assessment of professional performance," was only ranked as seventh in importance by school administrators; eighth by all participants, untenured teachers, and veteran teachers; and ninth by recently tenured teachers. All study groups unanimously ranked informal assessment of performance as more important than formal assessment, especially school administrators and recently tenured teachers. Formal evaluations take much more time to schedule, conduct, follow up, and document, and procedures must be followed according to the state of Pennsylvania and in compliance with the bargaining unit agreement for the district. Informal assessments, however, do not have to be scheduled or documented, take less time, and are not bound to any regulations or contracts. Therefore, the rankings of these similar items is not unexpected.

Ranked as the third most important item in this section of the survey by veteran teachers was "Administratively-set expectations and norms of teacher conduct, professional responsibilities, appearance, conduct, and identity," and this item was ranked fourth by all participants, fifth by untenured teachers and school administrators; although this same item was only ranked as seventh in importance by recently tenured teachers, none of the aforementioned differences were statistically significant. Interestingly, "Setting goals for self-improvement and transferring the acquired knowledge, skills,

beliefs, and attitudes needed to succeed" was ranked as fourth-most important by untenured teachers and recently tenured teachers, sixth by all participants and school administrators, and seventh by veteran teachers. The interesting dynamic is that veteran teachers viewed the administratively-set item as third in importance, but the self-set item was only ranked as seventh in importance by this same study group. Conversely, untenured teachers and recently tenured teachers ranked the self-set item as more important than the administratively-set item. However, one cannot conclude from these results that there is a direct correlation between years of teaching experience and belief in importance of administratively-set goals, since untenured teachers ranked the administratively-set item as fifth in importance, but recently tenured teachers ranked it seventh. One can conclude, however, that veteran teachers differed from less experienced teachers on these concepts, and school administrators ranked them similar in importance.

"Having a working knowledge and understanding of teachers' legal liabilities and responsibilities" was ranked fifth in importance by recently tenured teachers, sixth by veteran teachers, seventh by all participants and untenured teachers, and ninth by school administrators; none of these differences were statistically significant. Typically, untenured teachers are not very involved with such topics unless they need to be, whereas tenured teachers become involved in teacher union issues, including legal issues. Small wonder, then, that school administrators would rank this item close to the least important item in this section. Also ranked as less important than most other items by all study groups was "Learning what it means to be a professional and acquiring a professional vocabulary," which was ranked eighth by recently tenured teachers and school

administrators, ninth by all participants and veteran teachers, and tenth out of eleven items by untenured teachers.

Finally, there was unanimous consensus by all study groups that "Receiving guidance for collecting artifacts for a portfolio" was the least important item in this section of the survey. All study groups ranked "Contributing to the school and district and participating in school functions" as second-least important except for untenured teachers, who ranked this as third-least important. There was consensus, therefore, between study groups as to the least important items in this section.

In summary, for the "Professional & Support" section of the survey, all participants and each teacher study group were unanimous in the rankings of the most important and least important items. Untenured teachers, recently tenured teachers, and school administrators combined all ranked the second-most important item the same, and veteran teachers ranked this item statistically significantly less important than these groups combined. The rest of the items in this section were ranked similarly among study groups as previously delineated, and there were no other statistically significant differences between any study groups.

Section V: OBSERVATIONS & FEEDBACK

There were no items in this section of the survey in which there was unanimous consensus for the rankings, and there were three items in which there were significant differences between study groups. However, there was consensus on the two most important items, although not in the same order. "Specific suggestions and feedback from observations about what can be done better" was ranked as the most important item

in this section of the survey by untenured teachers and recently tenured teachers, and was ranked second-most important by all participants, veteran teachers, and school administrators. Conversely, "Being observed by and receiving coaching with other experienced teachers and mentors" was ranked as most important by all participants, veteran teachers, and school administrators, and as second-most important by untenured teachers and recently tenured teachers. Both items deal with new teachers being observed and receiving feedback and coaching with the focus specifically on the new teacher, so there was consensus as to the most important general topic for this section. "Opportunities for classroom visits and observations of other teachers" was ranked third in importance by all participants and all study groups except for school administrators, who ranked it as fourth in importance. This item is similar to the two previous items, with the emphasis shifting from observations *of* new teachers to observation *by* new teachers; both concepts were ranked as the most important for this section.

There was much disparity among study groups for those survey items ranked neither most nor least important in this section. School administrators ranked "Informal visits and conversations and receiving informal administrative feedback" as third in importance, while recently tenured teachers ranked this item fourth; all participants and untenured teachers ranked this same item as fifth in importance, while veteran teachers ranked it as only sixth in importance. Furthermore, school administrators ranked this item as statistically significantly more important than veteran teachers, and school administrators also ranked this item as statistically significantly more important than untenured teachers as well. Recall that school administrators ranked a similar item – "Ongoing informal assessment of professional performance" - as third in importance in

the fourth section of the survey, which was also ranked more important, albeit not significantly so, than any other study group or combination. Informal observations and interactions, therefore, were ranked as consistently important by school administrators, and for this section of the survey, as statistically significantly more important than some other study groups. According to these results, teachers therefore believe that informal administrative observations are not as important as school administrators believe.

Teachers and administrators, though, believe informal observations to be more important than formal ones, as concluded from synthesizing the fourth section of the survey. This finding was corroborated in this section of the survey as well: "Receiving formal written evaluations from an administrator that links teaching to student achievement" was ranked as only sixth in importance by untenured teachers, seventh by all participants, and next-to-last in importance by recently tenured teachers, veteran teachers, and school administrators. Furthermore, untenured teachers ranked this item as statistically more significant than recently tenured teachers, veteran teachers, and school administrators combined. Given the previously discussed time, regulation, and teacher contract constraints connected to formal evaluations, it is not surprising that formal evaluations are ranked as much less important than informal ones. Untenured teachers, no doubt craving feedback more than experienced teachers, ranked this item significantly more important than the other study groups, albeit as less important than informal observations.

For those items ranked as being of average importance in this section of the survey, "Demonstration of a model lesson from an expert teacher" was ranked the most consistently – fourth by all participants and untenured teachers, and fifth by recently

tenured and veteran teachers and school administrators. There was much disparity between and among rankings for the item "Mentors to help analyze student work and achievement," although there were no statistically significant differences. Veteran teachers ranked the latter as fourth in importance, all participants and recently tenured teachers ranked it as sixth in importance, school administrators ranked it as seventh in importance, and untenured teachers ranked it as eighth in importance. Reiterating, although veteran teachers ranked this as fourth in importance and untenured teachers ranked it as eighth, the difference was not statistically significant. Curiously, the most important ranked items for the second and fourth sections of the survey mentioned mentors and mentoring ("Providing new teachers with co-planning and mentoring time with other teachers and peers" and "Mentors to demonstrate teaching methods and to assist with lesson plans for student mastery"), but the item in this fifth section of the survey was ranked lower by all study groups. The difference must be that the former two items imply mentors to help new teachers with planning and pedagogy, while the latter item deals with mentors to help analyze student work. There clearly is a difference in the importance that the participants give to the particular purpose and responsibility given to the mentors and the mentoring process. *According to the results of the survey, mentors are quite important to the new teacher induction process, and they should focus on directly helping the new teachers with planning and teaching methodology as opposed to assessing student work.*

"Being observed by the superintendent, principals, and/or other administrators" was ranked as seventh in importance by untenured teachers and recently tenured teachers, eighth by all participants, and least important by veteran teachers and school

administrators. Furthermore, untenured teachers and recently tenured teachers combined ranked this item as statistically significantly more important than did veteran teachers and school administrators combined. Again, less experienced teachers (e.g. untenured or recently tenured) need more feedback on their classes and lessons than experienced teachers (e.g. veteran teachers), so perhaps veteran teachers ranked this item more on a personal basis than what is necessary for new teacher induction programs. School administrators also ranked this item as least important, perhaps because the building principal is almost always primarily responsible for formal evaluations of all teachers, tenured or not. Having administrators other than building principals, therefore, did not rank as very important to any study group.

Finally, "Supervision distributed throughout the faculty in an organized, consistent, and continuous program" was ranked as least important by all participants, untenured teachers, and recently tenured teachers; seventh in importance by veteran teachers; and sixth in importance by school administrators; none of these differences were statistically significant. Perhaps this item was ranked as unimportant because less experienced teachers have a smaller circle of trusted peers and experienced teachers, and they feel more comfortable having a smaller circle in which to confide. Having all faculty contribute to supervision assumes that all faculty are properly trained to do so, and that faculty all convey a positive attitude. This assumption is not the case in most public schools, although building principals typically strive to maintain a positive tone throughout their building. According to the results of this survey, then, supervision of new teachers should be limited to those trained and assigned to do so, rather than having the entire faculty be part of supervision.

In summary, for the "Observations & Feedback" section of the survey, all participants and each teacher study group were unanimous in the rankings of the two most important items, but there was disparity among the rankings of all other items (with the exception of one item ranked in the middle). School administrators ranked "Informal visits and conversations and receiving informal administrative feedback" statistically significantly more important than did either untenured teachers or veteran teachers. Untenured teachers ranked "Receiving formal written evaluations from an administrator that links teaching to student achievement" as statistically significantly more important than did recently tenured teachers, veteran teachers, and school administrators combined. Untenured teachers and recently tenured teachers combined ranked "Being observed by the superintendent, principals, and/or other administrators" as statistically significantly more important than did veteran teachers and school administrators combined. There was disparity for the rankings of the other items in this section of the survey, but none were statistically significant.

Section VI: PROCEDURAL & MANAGERIAL

All participants and each study group agreed that the two most important items in this section of the survey were "Addressing effective classroom management procedures and routines" as most important, followed by "Addressing school and district procedures for student discipline, defusing potential discipline problems, and dealing with difficult students." Managing the classroom and students was far and away the most important item in this section according to all participants. Unanimously ranked as the least important item by all participants and each study group was "Providing a plan for

substitute teachers." While educators know this is a necessary part of planning, it was regarded as least important for new teachers, since the expectation of new teachers planning to be absent was not seen as a necessary topic for new teacher induction programs.

The remaining eight items in this section of the survey were ranked similarly in most cases, but very dissimilar in a few cases. For example, although the two most important items were ranked exactly the same and in the same order by all participants and by each study group, there was no little to no consensus between study groups regarding the third-most important ranked item. "Having a 'start-of-school' checklist" was ranked third by all participants and untenured teachers, fourth in importance by recently tenured teachers and veteran teachers, but seventh by school administrators; none of these differences were statistically significant. Many school districts use checklists for teachers at both the beginning and the end of a school year, so the speculation would be that school administrators did not necessarily view this item as important only to new teacher induction programs, but rather to *all* teachers.

Recently tenured teachers and school administrators ranked "Effective time management with high student levels of time on task" as the third most important item for this section of the survey, but all participants, untenured teachers, and veteran teachers each ranked this item as only seventh in importance. Furthermore, recently tenured teachers and school administrators combined ranked this item as statistically significantly more important than untenured teachers and veteran teachers combined. This was an unexpected result, and it is interesting to speculate as to how recently tenured teachers agreed with school administrators on the importance of this item, as well as how

untenured teachers and veteran teachers agreed. Perhaps school administrators learn through experience that there tend to be less disciplinary referrals when students are engaged in tasks, and more disciplinary issues when students are idle; recently tenured teachers perhaps learn this by trial and error as they venture through the first few years of teaching, when they typically learn that even well-planned lessons may leave idle time at the end of class when lessons do not go according to planned time. Perhaps veteran teachers believe that this is less important for new teachers to learn simply because once they acquire enough experience, they have learned to plan accordingly so that there is not idle time left at the end of class for disciplinary disruptions to occur. Perhaps untenured teachers do not know that idle time causes behavioral disruptions until they experience it over time. While speculative, these explanations may be part of the reason for the disparity between combined groups for this survey item.

The item with the most disparity in ranking for this section of the survey was "Maintaining accurate records and documentation," which was ranked third most important by veteran teachers, fourth by all participants and untenured teachers, sixth by school administrators, and yet eighth by recently tenured teachers. Although there was disparity, there was only one difference that was statistically significant – veteran teachers ranked this item as statistically significantly more important than did recently tenured teachers. This result was also unexpected, and it is interesting and complex to speculate as to why these differences occurred. Perhaps part of the answer to this lies in examining another item in which there was disparity, particularly regarding how recently tenured teachers differed in their ranking from the other study groups. Recently tenured teachers ranked "Avoiding 'down-time' strategies and set of quick and easy backups for

when things don't go as expected" was ranked as fifth in importance by recently tenured teachers, but only eighth by all participants, ninth by veteran teachers and school administrators, and next-to-last in importance by untenured teachers. Recently tenured teachers ranked this item as statistically significantly more important than did untenured teachers, and recently tenured teachers also ranked this item as statistically significantly more important than did veteran teachers and school administrators combined.

All participants and each study group, except for recently tenured teachers, thought that effective time management and students on task was important for new teacher induction. Conversely, all participants and each study group, except for recently tenured teachers, thought that having a set of backup materials was not important for new teacher induction. Recall that for purposes of this study, recently tenured teachers were defined as tenured teachers with less than ten years of teaching experience. During the first few years of teaching, teachers discover that keeping students on task is a necessary component of classroom management, and it also leads to a reduction in disciplinary problems, as previously discussed; often, new teachers struggle with this ideology, and it takes several years to cultivate this component of classroom management and teaching. Experienced teachers are usually more apt to deal with classroom situations wherein the lesson or other variables do not happen as expected, and developing this trait only happens by dealing with real-life classroom experiences. Consequently, recently tenured teachers perhaps are still developing effective time management and dealing with impromptu situations, and they therefore ranked this item significantly more important than the other study groups. On the other hand, recently tenured teachers ranked maintaining accurate records and documentation as significantly less important than the

other study groups. School administrators typically deal with properly documenting things on an almost daily basis, although this item only ranked as sixth most important in this section by this study group. Veteran teachers ranked this item as third in importance, perhaps due to the experiences of dealing inside and outside of the classroom, where teachers often are held accountable for their documentation of everything regarding students. Untenured teachers, however, ranked this same item as significantly less important than veteran teachers, indicating that the experience of teachers probably influenced the ranking of this item.

All participants, untenured teachers, and veteran teachers ranked "Identifying and dealing with individual students' needs, interests, abilities, and problems" as the fifth most important item in this section of the survey, and this same item was ranked fourth in importance by school administrators but seventh by recently tenured teachers. Clearly, recently tenured teachers differed the most from all other study groups for the "procedural & managerial" items in the survey, and this item was no exception, although no differences were statistically significant.

The remaining three items in this section were ranked differently, but similarly, by all study groups. "Familiarity with locating and obtaining instructional resources and materials" was ranked as sixth in importance by all participants and each study group except for school administrators, who ranked it fifth. "Movement of students (start and end of a period or day, fire drills, crisis drills, etc.)" was ranked as eighth in importance in this section by untenured teachers, veteran teachers, and school administrators, and ninth in importance by all participants and recently tenured teachers. Ranked not important by any study group was "Assigning new teachers to smaller classes, reduced

workloads, and reduced number of course preparations," which was ranked as next-to-last in importance by all participants and each study group except for untenured teachers, who ranked it ninth in importance. These items were ranked less important than many other items in this section, and the similarity is that these items are generally beyond the control of the new teacher, rendering them as less important to include in new teacher induction programs. Movement of students outside of the classroom is limited by individual teachers, and storage of instructional materials and teaching assignments are out of control of new teachers altogether.

In summary, for the "Procedural & Managerial" section of the survey, all participants and each teacher study group were unanimous in the rankings of the two most important items in the same order, as well as the least important item. Recently tenured teachers ranked most of the remaining items in this section differently than the other study groups, some significantly so. Recently tenured teachers ranked "Avoiding 'down-time' strategies and set of quick and easy backups for when things don't go as expected" as statistically significantly more important than untenured teachers, as well as statistically significantly more important than veteran teachers and school administrators combined. Veteran teachers ranked "Maintaining accurate records and documentation" as statistically significantly more important than recently tenured teachers. Finally, recently tenured teachers and school administrators combined ranked "Effective time management with high student levels of time on task" as statistically significantly more important than untenured teachers and veteran teachers combined. There was disparity for the rankings of the other items in this section of the survey, but none were statistically significant.

Section VII: INSTRUCTIONAL

All participants and each study group agreed that the most important item in this section of the survey was "Using effective instructional practices, strategies, techniques, and selecting instructional goals." Also, all participants and each study group agreed on the two least important items in this section of the survey in the same order; ranked least important was "Integration and use of technology," followed by "Planning, organizing, and managing instruction and physical space." All participants and each study group ranked "Knowledge of teaching resources, subject/curriculum, pedagogical content, and ways of teaching specific subject matter" as second most important in this section except for untenured teachers, who ranked this item fourth, and this difference *was* statistically significant. Perhaps this is because new teachers have most recently been students at a university, where they were expected to learn these concepts in order to become certified teachers.

There was quite a bit of disparity between study groups for the remaining items in this section. For example, "Engaging students in critical thinking, probing for knowledge, and providing feedback to students" was ranked as third most important in this section of the survey by untenured teachers and school administrators, fifth by all participants and recently tenured teachers, but seventh by veteran teachers, although none of these differences were statistically significant. Once again, the experience of the teachers affected the ranking of an item; for this item, the more experienced the teacher, the less importance was given to this item.

"Relating lessons to real life, ensuring that students are aware of the substance and purpose of what they are being asked to do" was ranked as second-most important by

untenured teachers, third in importance by all participants and recently tenured teachers, fifth by school administrators, and sixth by veteran teachers. Recently tenured teachers ranked this item as statistically significantly more important than school administrators, and statistically significantly more important than veteran teachers also. Yet again, the experience of the teachers affected the ranking of this item - the more experienced the teacher, the less importance was given to this item. School administrators ranked this item similarly to veteran teachers.

There was more of a disparity in ranking among the study groups for the item "Encouraging active student participation, using appropriate and varied questioning and discussion techniques and incorporating pupil ideas" than for any other item in the entire survey. Veteran teachers ranked this item as third most important item in this section, while all participants ranked it fourth, recently tenured teachers ranked it fifth, untenured teachers ranked it seventh, but school administrators only ranked it third-to-last in importance. Furthermore, veteran teachers ranked this item statistically significantly more important than recently tenured teachers, veteran teachers also ranked this item statistically significantly more important than school administrators, and recently tenured teachers ranked this item statistically significantly more important than school administrators. This item did not follow the trend of years of experience correlating with the rank. Veteran teachers ranked this item as very important, behind only effective instructional practices and knowledge of curriculum and subject matter, while school administrators ranked this item as not important, ahead of only integration of technology and managing instruction and physical space. The literature on new teacher induction emphasizes the importance of active student participation (e.g. Breaux & Wong, 2003;

Wong & Wong, 2001; Breaux, 2003; Danielson, 1996), using appropriate and varied questioning and discussion techniques (e.g. Danielson, 1996; Tickle, 2000; Wong & Wong, 2001), and incorporating pupil ideas (e.g. Tickle, 2000; Breaux, 2003). It is quite surprising, therefore, that school administrators ranked this item as significantly less important than other study groups under instruction. A plausible explanation, then, is that since school administrators ranked "Engaging students in critical thinking, probing for knowledge, and providing feedback to students" as the third most important item in this section, perhaps they did not believe that mere student participation was enough to be part of new teacher induction. For example, it is simple to ask students questions for which the answer is only 'yes' or 'no,' and one could as easily ask three-choice multiple choice questions. While this technically could be considered as encouraging active student participation and using appropriate and varied questioning techniques, it could hardly be considered and engaging students in critical thinking and probing for knowledge. The difference is in the levels of questions asked of students – low-level questions (yes/no, true/false, a/b/c) require low-level thinking to answer, while high level questions require critical thinking skills. Perhaps school administrators, responsible for observing teachers and ostensibly asking them to ask more high-level questions of students, varied in their ranking of this item for that reason.

Another item in this section of the survey in which there was disparity between study groups' rankings was "Setting clear targets and expectations for students' learning and achievement while linking performance to high standards," which was ranked as fourth in importance by veteran teachers, sixth by all participants, seventh by school administrators, eighth by untenured teachers, and tenth by recently tenured teachers.

Also, veteran teachers ranked this item as statistically significantly more important than did recently tenured teachers. Veteran teachers ranked this item as important to new teacher induction, while less experienced teachers ranked it as not important. For this section of the survey, veteran teachers ranked most of the items differently than the other study groups, and this item was no exception. It is unclear why the other study groups would rank this item in the bottom half of the items in this section, but perhaps again the wording of the item played a role. Standards are typically linked to curriculum and instruction instead of to student performance, and perhaps this was why this item ranked low for most study groups. Veteran teachers, perhaps because of their experience in the classroom and being currently still in the classroom, believed that clear targets and expectations are more necessary for successful learning than some other items. Whatever the case, there was a difference in opinions as to where this item ranked.

There was more ranking disparity for the remaining items, although for none of them were the differences statistically significant. Veteran teachers ranked "Maximizing academic learning time and designing and planning coherent instruction with lesson clarity and instructional variety" as fifth most important for this section, while all participants and school administrators ranked it eighth and untenured teachers and recently tenured teachers ranked it ninth. Perhaps the argument for why the veteran teachers ranked this item higher than the other study groups applies for item as well. Untenured teachers, recently tenured teachers, and school administrators ranked "Addressing a variety of student evaluation processes using student assessment data to improve instruction" as sixth in importance, while it was ranked eighth by veteran

teaches and ninth by all participants. This result is interesting, yet correct, since all participants combined ranked the item lower than any single study group.

Recently tenured teachers and school administrators ranked "Analyzing and understanding a range of teaching and learning styles" as the fourth most important item in this section of the survey, while it was ranked seventh by all participants and untenured teachers, and ninth by veteran teachers; none of these differences were statistically significant. Perhaps school administrators emphasize this topic with new teachers, and recently tenured teachers as a result incorporate this idea in their lessons, but veteran teachers, who have more autonomy in their classrooms, do not believe this is an important point of emphasis for new teacher induction. Finally, "Special education issues" was ranked as eighth in importance by recently tenured teachers, ninth by school administrators, and tenth by all participants, untenured teachers, and veteran teachers. Since special education issues are prevalent in public education today, and these issues are mandated by both state and federal legislation, teachers and administrators focus on special education all the time, not just for new teachers; this may help explain why this item was ranked near the bottom in this section of the survey.

In summary, for the "Instructional" section of the survey, all participants and each teacher study group were unanimous in the rankings of the most important item, as well as the two least important items in the same order. Veteran teachers ranked most of the remaining items in this section differently than the other study groups, some significantly so. Recently tenured teachers, veteran teachers, and school administrators combined ranked "Knowledge of teaching resources, subject/curriculum, pedagogical content, and ways of teaching specific subject matter" as statistically significantly more important

than untenured teachers. Veteran teachers ranked "Setting clear targets and expectations for students' learning and achievement while linking performance to high standards" as statistically significantly more important than recently tenured teachers. Recently tenured teachers ranked "Relating lessons to real life, ensuring that students are aware of the substance and purpose of what they are being asked to do" as statistically significantly more important than did school administrators, as well as statistically significantly more important than did veteran teachers. Veteran teachers ranked "Encouraging active student participation, using appropriate and varied questioning and discussion techniques and incorporating pupil ideas" as statistically significantly more important than did untenured teachers, as well as statistically significantly more important than did school administrators. Finally, untenured teachers ranked "Encouraging active student participation, using appropriate and varied questioning and discussion techniques and incorporating pupil ideas" as statistically significantly more important than did school administrators.

Discussion

- The number of items for each section of the survey varied from eight to twelve, which would have an impact for calculating statistical significance. However, there was unanimous consent on the rankings of many of the most and least important for all study groups for most of the sections of the survey, which would decrease the number of items ranked differently in between, decreasing the number used in statistical significance analysis:

Table 3: Relative Number of Survey Items for Each Section of the Survey Accounting for Unanimously Ranked Most and Least Important Items

Section	# Items in section	# Unanimous Ranked Most Important Items	# Unanimous Ranked Least Important Items	**Net # Items in Section for Significance Calculation**	**# Significant Differences Between Items**
1	10	1	0	**9**	**1**
2	8	0	3	**5**	**3**
3	8	1	0	**7**	**0**
4	11	1	1	**9**	**1**
5	9	0	0	**9**	**4**
6	11	2	1	**8**	**4**
7	12	1	2	**9**	**7**

Therefore, the largest possible difference in rankings for any section after discarding the unanimously ranked most and least important items was eight, and the largest actual difference between any two items' rankings in any section of the survey was six. Recall that the $\sum X$ values were calculated by multiplying the ranking order by the number of respondents for that ranking. The two-sample t statistic is calculated with the formula:

$$t = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{\sqrt{[(s_1^2/n_1) + (s_2^2/n_2)]}},$$

where x_1 and x_2 are the means of the two samples, μ_1 and μ_2 are the means of the two populations, s_1 and s_2 are the sample standard deviations, and n_1 and n_2 are the sample sizes. Thus, $x_1 - x_2$ represents the sample mean difference, $\mu_1 - \mu_2$ represents the hypothesized population mean difference, and the denominator represents the estimated standard error. The estimated standard error of the mean difference estimates the amount of error expected when estimating a population mean difference with a sample mean difference.

Therefore, as the sample mean difference increases, the larger the t-statistic gets. Similarly, the smaller that n_1 and n_2 get, the larger the t-statistic gets, and the more likely it is that there will be a statistically significant difference between two samples. Since the number of net items decreased due to the number of unanimously-ranked most and least important items in each section of the survey, the likelihood that two samples would have a statistically significant difference would decrease. That said, there still were twenty (20) instances wherein two samples had a statistically significant difference between the relative rankings of items. Considering that there were seven sections, this was a larger than expected amount of significant differences. The items that had statistically significant differences between samples are summarized in Appendix M.

- Of those twenty items in which there was a statistically significant difference between study groups, the number of differences between study groups or study groups combined is listed in Appendix M. All but two sets of groups differed for only one item except for two combinations: veteran teachers ranked three (3) items as statistically significantly more important than recently tenured teachers, and school administrators ranked two (2) items as statistically significantly more important than veteran teachers.

Specifically, veteran teachers ranked the following three items as statistically significantly more important than did recently tenured teachers: "Maintaining accurate records and documentation," "Encouraging active student participation, using appropriate and varied questioning and discussion techniques, and incorporating pupil ideas," and "Setting clear targets and expectations for students' learning and achievement while linking performance to high standards." Of the four study groups, these two groups consisted of experienced teachers, the difference being in longevity of teaching. It is surprising, therefore, that three items – more than any other study group differences – were ranked significantly differently by recently tenured teachers and veteran teachers. As has been discussed, experience of teachers did make a difference in many cases of items not ranked as most or least important, and there was a clear difference between recently tenured teachers and veteran teachers.

It was surprising that the two groups which differed on the most items were recently tenured teachers and veteran teachers. The prediction before the study was that school administrators would differ more than teachers, but this was not the case. Furthermore, of the four study groups, recently tenured teachers and veteran teachers have the most in common – both groups are tenured teachers, separated only by years of experience. These two study groups, however, differed on more items than any other combination of separate groups. Perhaps an analogy could help to explain this anomaly, such as driving a vehicle. A prospective unlicensed driver would certainly defer to a veteran driver for guidance in learning how to drive, not to mention to a person qualified to test the prospective driver, even if the unlicensed driver disagreed with either. Once the unlicensed driver passed the driver's exam, he or she likely would no longer listen or

agree with the veteran driver who was instrumental in helping, especially if there were disagreements. A person in a temporary position typically will be cooperative and defer his or her own opinions in order to obtain a permanent position, and once that is attained, that person will not necessarily still defer those opinions. Similarly, an untenured teacher would certainly defer to a veteran teacher for guidance in learning how to teach, not to mention to a school administrator qualified to evaluate the prospective teacher, even if the untenured teacher disagreed with either. Once the untenured teacher became tenured, he or she likely would no longer listen or agree with the veteran teacher who was instrumental in helping, especially if there were disagreements.

School administrators ranked the following two items as statistically significantly more important than did veteran teachers: "Supporting improvement of teaching practice at teachers' individual points of need" and "Informal visits and conversations and receiving informal administrative feedback." It is not surprising that veteran teachers and school administrators ranked some items significantly differently from one another; one need only investigate union grievances as an example of veteran teachers disagreeing with school administrators. Both of these items in which these two study groups differed deal with school administrators helping new teachers during the regular school day as part of new teacher induction; school administrators ranked this idea as more important than did veteran teachers.

- A further analysis of these twenty (20) survey items in which study groups statistically significantly differed from one another reveals that school administrators differed significantly from other study groups on nine (9) items, veteran teachers on eight (8), recently tenured teachers on seven (7), and untenured teachers on only five (5). The

more experienced the group of teachers, the more items for which there were significant differences in rankings of items, corroborating the notion that inexperience accounts for much of teachers' effectiveness (ERIC Clearinghouse on Teacher Education, 1986). Also, the more responsibility in the system, the more items for which there were significant differences in rankings of items.

Examining pairs of study groups reveals that untenured teachers and recently tenured teachers combined differed statistically significantly from other study groups on two (2) items, veteran teachers and school administrators combined on two (2) items, untenured teachers and veteran teachers on one (1) item, recently tenured teachers and veteran teachers combined on one (1) item, recently tenured teachers and school administrators on one (1) item, and untenured teachers and school administrators on zero (0) items. Curiously, veteran teachers and school administrators separately differed on more items than all but one other pair of study groups, but veteran teachers and school administrators combined together differed from other study groups more than all but one other pair of study groups (untenured teachers and recently tenured teachers). Although veteran teachers and school administrators had their differences, they also agreed on many various items' importance throughout the survey.

Examining trios of study groups reveals that recently tenured teachers, veteran teachers, and school administrators combined differed statistically significantly from other study groups on two (2) items; untenured teachers, recently tenured teachers, and veteran teachers on one (1) item; untenured teachers, recently tenured teachers, and school administrators on one (1) item; and untenured teachers, veteran teachers, and school administrators on zero (0) items. Interestingly, the largest combined study group

of educators with more than three years' experience differed from new teachers on more items than any other trio of groups, including all teacher groups combined.

- Throughout the survey, there was much consensus between and among study groups regarding the most and the least important items for each section of the survey. For the remaining items ranked in between, there was much disparity between and among study groups regarding the rankings of items. The study groups were in agreement on the rankings the most for the section "Structure of Induction Program," where there were no instances of items in which there were any statistically significant differences between study groups. Conversely, the most diversity between and among study group rankings was for the section "Instructional," where there were seven instances of items in which study groups ranked them statistically significantly differently from each other, even though there was unanimous consensus on the most important and two least important items in this section of the survey.
- The items that were ranked as *most* important for each section of the survey by all participants were maintaining a positive attitude, experiencing and building on successes, and receiving emotional support (unanimous); providing new teachers with co-planning and mentoring time with other teachers and peers; the new teacher induction program addressing the immediate needs of new teachers (unanimous); mentors to demonstrate teaching methods and to assist with lesson plans for student mastery (unanimous); being observed by and receiving coaching with experienced teachers and mentors; addressing effective classroom management procedures and routines (unanimous); and using effective instructional practices, strategies, and techniques, and selecting instruction goals (unanimous). (The three most important items for each section of the survey are listed in

Appendix N.) The items throughout the survey that were ranked most highly were those that had positive components and connotations (i.e. student mastery, coaching, effective practice, etc.). Having access to mentors who can help new teachers throughout their first few years of teaching was commonly ranked as one of the most important components of new teacher induction. Furthermore, the most important ranked items referred to addressing immediate needs of new teachers, rather than long-term goals. Items that had the work "effective" in them also ranked highly throughout the survey, such as some of the previously mentioned highest-ranked items. Also, these items that ranked as most important dealt with structuring effective classroom lessons and letting new teachers observe other teachers as well as being observed informally themselves. Finally, for five of the seven sections, the item that ranked as most important was ranked as such by all participants and *unanimously* as such by all study groups, an indication that these items indeed should continue to be stressed in new teacher induction programs throughout Southwestern Pennsylvania.

These ideas also were discussed in much of the literature regarding new teacher induction as delineated in the first chapter of this study. The idea of new teachers learning to teach while teaching (Stigler & Hiebert, 1999) is manifested in the ideas of mentors working with new teachers, new teachers observing other teachers and receiving feedback of their own teaching, etc. New teachers need systematic training and support throughout their first few years of teaching (Delisio, 2003; Breaux, 2003), and expert mentors are a key part of new teacher effectiveness and retention (Darling-Hammond, 1996; Israel, 2002); these concepts were corroborated by the most important ranked items in the survey. Effective interactions with mentors was ranked as important throughout

the survey, and collaboration with other teachers – veterans, mentors, new teachers, master teachers – was ranked as important in new teacher induction programs throughout the survey as well. Collaboration was a common theme in the literature as well, especially strengthening interactions in teacher education and having ample opportunities to collaborate, discuss, and study aspects of teaching with colleagues (American Federation of Teachers, 2000; McCann, Johannessen, & Ricca, 2005; Moore Johnson & Kardos, 2005; Carver, 2004; Duck, 2000; Breaux & Wong, 2003).

- The items that were ranked as *least* important for each section of the survey by all participants were dealing with fatigue; bus tour of school district (unanimous); the induction program consisting primarily of formal seminars; receiving guidance for collecting artifacts for a portfolio (unanimous); supervision is distributed throughout the faculty in an organized, consistent, and continuous program; providing a plan for substitute teachers (unanimous); and integration and use of technology (unanimous). (The three least important items for each section of the survey are listed in Appendix N.) The items throughout the survey that were ranked least highly were those that had negative components and connotations (i.e. fatigue, planning to be absent, formality, etc.). The actual structure of the new teacher induction program was unimportant as to levels of formality – both formal and informal structures were ranked as unimportant. Furthermore, the least important ranked items referred to addressing long-term needs of new teachers. Building a portfolio was ranked as unimportant, perhaps because building a portfolio implies looking for another job somewhere else, which should not be stressed for new teachers beginning their careers. Finally, for four of the seven sections, the item that ranked as least important was ranked as such by all participants and *unanimously* by

all study groups, an indication that these items indeed should **not** be stressed in new teacher induction programs throughout Southwestern Pennsylvania.

Although the concepts behind these items that were ranked as least important exist in the literature regarding new teacher induction, it does not necessarily imply that these items are not necessary at all for teachers or new teachers – rather, it implies that according to the participants in this research study, these were the items that are least important in the context of all the items in all sections of this survey. For example, entering the social and political culture of a new school (Hebert & Worthy, 2001; ERIC Clearinghouse on Teacher Education, 1986) is something for which teachers typically strive, but perhaps not at the beginning of their careers as much as after they have established themselves in a school and district. As previously discussed, an expectation of all teachers in recent years is being fluent in using technology, although this item ranked least important in its section of the survey. Even though some authors believe this is important to include in new teacher induction (e.g. National Education Association, 2002), perhaps the participants of this survey understand that new teachers upon their hire are typically expected to understand how to use and integrate technology, so this item may have been ranked as unimportant to be included in new teacher induction programs.

This latter point is further illustrated by Danielson (1996), who delineates her four domains of teaching responsibility, the fourth of which is "professional responsibilities." The "common themes" for this domain that she lists and discusses are equity, cultural sensitivity, high expectations, developmental appropriateness, accommodating students with special needs, and appropriate use of technology (Danielson, 1996). Note, however, that understanding of cultural and ethnic differences, integration and use of technology,

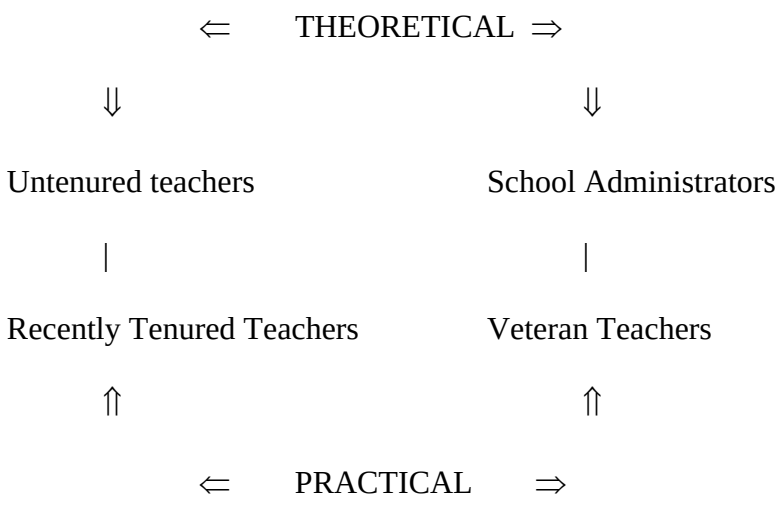
and special education issues were all ranked at or near as the least important items in the survey. Teachers are legally responsible for meeting the needs of special education students on both state and federal levels, so suggesting that special education issues are unimportant is simply unrealistic. Why the discrepancy? This again illustrates that although some items in the survey may have ranked as unimportant, this does not imply that the item itself is unimportant for teachers – rather, it implies that the survey participants ranked the item as less important than the others *in new teacher induction programs*.

• Another surprising result was that in the sixth section of the survey, "Assigning new teachers to smaller classes, reduced work loads, and reduced number of course preparations" was ranked as next-to-last in importance by each study group except for new teachers, who ranked it third from least in importance. This is surprising for at least two reasons, first of which is that much of the literature suggested that this is essential to helping new teachers learn how to teach. (The very beginning of this research discussed how new teachers struggle quite a bit because they are expected to do everything that experienced teachers do while learning to do it at the same time!) Perhaps that is why this item is discussed so often in the literature, because educators have not yet embraced this concept.

Secondly, it was surprising to discover that untenured teachers thought that smaller classes, reduced work loads, and reduced course preparations were not very important to them. Perhaps new teachers believe that they are capable of succeeding without these structures in place, and indeed are eager to prove their worthiness to be included as regular teachers as soon as possible.

• This study showed that there is a continuum of understanding, considering that untenured teachers did not differ on many items with school administrators, yet recently tenured teachers differed on many items with veteran teachers. In other words, those new to any profession are idealistic about their profession, and bring more theory of the profession to the table than do those with much experience steeped in the practical aspects of the profession. School administrators, removed from the daily tasks surrounding teaching in a classroom every day, are expected to embrace educational theories that are successful and sound, and they are expected to convey these to teachers as part of their work. Therefore, there is a continuum of theoretical and practical emphases that can be depicted in Figure 2 below:

FIGURE 2: CONTINUUM OF THEORETICAL AND PRACTICAL EMPHASIS



• Finally, the results of the survey showed what should be emphasized more and less in new teacher induction according to the majority of all study groups – untenured teachers, recently tenured teachers, veteran teachers, and school administrators. These suggestions are illustrated in Table 4:

Table 4: Items That Should Be Emphasized More and Less in New Teacher Induction Programs

EMPHASIZE MORE	EMPHASIZE LESS
Positive Attitude, Experience and Build on Successes, Emotional Support	Being Observed By Superintendent and Other Administrators
High Expectations for Students	Dealing with Fatigue
Remaining calm and professional	"Survival Level" of Teacher Development
Quickly Recovering from Mistakes	Bus Tour of School District
Co-planning and Mentoring Time with Other Teachers and Peers	Supervision of Volunteers and Paraprofessionals
New Teacher Study/Support/Discussion Groups	Formal Seminars
Addressing the Immediate Needs of New Teachers	Addressing Long-Term Goals
Individual Follow-up by Experienced Teachers	Portfolio Artifacts
Mentors to Demonstrate Teaching Methods and Assist with Lesson Plans	Participating in School Functions
Content, Professional Practice, Strengthening Knowledge and Skills	Professional Vocabulary and Becoming a Professional
Observations and Coaching from Experienced Teachers and Mentors	Formal Assessment of Professional Performance
Specific Suggestions from Observations	Cultural and Ethnic Differences
Classroom Visits and Observations of Other Teachers	Supervisions Distributed Throughout Faculty
Effective Classroom Management	Mentors Analyzing Student Work
Student Discipline and Dealing with Difficult Students	Smaller Classes, Reduced Work Loads, Reduced Course Preparations
"Start of School" Checklist	Plan for Substitute Teachers
Effective Instructional Practices, Strategies, and Techniques	Movement of Students in Building
Teaching Resources, Subject/Curriculum, Pedagogy, and Specific Subject Matter	Planning, Organizing, and Managing Instructional and Physical Space
Relating Lessons to Real Life	Integration and Use of Technology
Selecting Instructional Goals	Special Education Issues

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APPENDIX A

Examples of Successful Induction Programs

Delaware provides mentors for all beginning teachers, and professional teaching standards are a large part of this (U.S. Department of Education, 1998). In this program, new teachers develop a portfolio based on the state's teaching standards; certification is granted if the portfolio meets the established criteria (U.S. Department of Education, 1998). Some cities have their own versions of induction programs as well. For instance, Columbus, Ohio, implements the Peer Assistance and Review Program (PAR), in which an appointed panel of four teachers and three administrators chooses PAR consultants - teachers who are nominated for the position - who work extensively with new teachers (interns) as well as experienced teachers who are having difficulties with their teaching (U.S. Department of Education, 1998). Omaha, Nebraska, has the Cadre Project that serves as a graduate program for beginning teachers and a professional renewal program for experienced teachers (U.S. Department of Education, 1998).

Breaux & Wong (2003) have identified several exemplary new teacher induction programs:

- Goldfarb Elementary School in the Clark County School District in Las Vegas, Nevada no longer uses mentors, opting instead to survey student teachers and new teachers as to their needs and converting the school into a “true learning community of educators sharing with and helping fellow educators” (Breaux & Wong, 2003). The goals of the program are “to train, support, and retain effective new teachers”, and “to acculturate the new teachers to how things are done at

Goldfarb and continue to ensure a vision of student achievement" (Breaux & Wong, 2003). These goals are found throughout the other literature, and the first of these goals regarding teacher retention appear in the interview instrument for this study.

- Gaston County Schools in North Carolina has received the Governor's Award for Excellence for their new teacher induction program, which focuses primarily on training, support, and retention (Breaux & Wong, 2003).
- Flowing Wells School District in Tucson, Arizona has developed a new teacher induction program that continues to receive national recognition (Breaux & Wong, 2003). The five attributes of this program are "effective instructional practices, effective classroom management procedures and routines, a sensitivity to and understanding of the Flowing Wells community, teaching as a reflection of lifelong learning and ongoing professional growth," and "unity and understanding among administration, teachers, support staff, and community members" (Breaux & Wong, 2003). The attributes of this program are similar to attributes of many other successful new teacher induction programs, and the aforementioned attributes are replete throughout the survey instrument of this study.

"Instruction," "procedural & managerial," "psychological & culture," and "professional & support" were actually four of the seven sections used in the survey instrument, which was crafted from all the literature. The Flowing Wells School District attributes are concepts replete throughout the literature and new teacher induction programs that are most successful.

Breaux & Wong (2003) list dozens of other good to exemplary new teacher induction programs, as do other authors regarding new teacher induction programs. When perusing the extensive literature, several underlying similar themes emerge. Those themes have been incorporated into the survey and interview instruments for this study so that the items being asked of the study groups are those items that are most prevalent in the literature and among and between those that have studied this topic previously and could be considered some of the foremost experts in the subject. When deliberating, it was important to keep this in mind as the survey was edited and compacted so that those elements that are important to new teacher induction are included in the study instruments, but they also had to be presented in a way so that the study instruments were manageable for the study groups and not cumbersome to analyze and synthesize.

Many new teacher induction programs are delineated in the Internet. Furthermore, since new teacher induction programs change constantly, it is important to realize that the results of this and other studies are meaningful, but have to be continually revisited so that as new teacher induction programs continue to evolve, they continue to include important items that are necessary to help new teachers in the best ways possible.

APPENDIX B

Demographics of districts in Allegheny, Washington, Westmoreland Counties

(http://www.SchoolsMatter.com)

Name	Reading Proficiency (%)	Math Proficiency (%)	Enrollment	Economically Disadvantaged Enrollment (%)	Students with Disabilities Enrollment (%)	Students Per Teacher	Operating Expenditures ($ Per Student)	Instructional Expenditures ($ Per Student)
Allegheny Valley School District	74.3	73.2	1,212	26.7	14.6	15.2	11,189	6,257
Avella Area School District	66.9	71.4	751	31.2	17.8	13.4	9,417	5,759
Avonworth School District	82.9	83.4	1,339	10.9	7.8	16.9	8,873	5,358
Baldwin-Whitehall School District	70.8	75.6	4,613	17.8	12.1	16.7	9,667	5,689
Belle Vernon Area School District	73.1	70.3	2,959	25.4	12.9	19.9	6,956	4,407
Bentworth School District	65.9	69.1	1,261	21.7	12.7	17.5	7,553	4,586
Bethel Park School District	84.6	81	5,212	7	11.4	14.7	9,512	6,328
Bethlehem-Center School District	69.4	66.7	1,414	45.4	16.2	14	10,066	5,633
Brentwood Borough School District	79.4	76.6	1,329	18.7	13.6	14.9	8,654	5,471
Burgettstown Area School District	62.6	63.6	1,544	29.4	16.2	15.1	7,383	4,894
Burrell School District	80.6	76	2,194	16.4	11.9	17.6	7,267	4,265

Name	Reading Proficiency (%)	Math Proficiency (%)	Enrollment	Economically Disadvantaged Enrollment (%)	Students with Disabilities Enrollment (%)	Students Per Teacher	Operating Expenditures ($ Per Student)	Instructional Expenditures ($ Per Student)
California Area School District	65.8	61.7	1,047	6.1	19.1	16.4	7,996	4,895
Canon-McMillan School District	78.9	74.7	4,325	18.3	11.2	16.1	8,442	5,160
Carlynton School District	72.8	63.1	1,623	0	11.7	15.8	10,636	6,685
Charleroi School District	64.5	57.4	1,668	32.4	18.5	14.1	7,861	4,966
Chartiers Valley School District	74	70.9	3,455	17.4	10.6	14.8	9,321	5,368
Chartiers-Houston School District	70.6	69	1,234	20.6	13.6	15.8	8,194	4,754
Clairton City School District	30	38.8	939	65.6	24.1	10.6	12,276	8,063
Cornell School District	62	63.7	750	0	21.6	12.3	10,896	7,032
Deer Lakes School District	76.9	76.9	2,098	10.7	14.4	15.3	9,630	5,707
Derry Area School District	74.6	71.5	2,757	38.8	8.9	16.5	7,862	4,825
Duquesne City School District	31.2	45.6	856	96.9	16.2	11	12,415	7,769
East Allegheny School District	66.1	67	1,994	37.8	16.4	18.3	8,223	4,668
Elizabeth Forward School District	74.7	69.3	2,959	19.6	14.1	15.8	8,381	5,251

Name	Reading Proficiency (%)	Math Proficiency (%)	Enrollment	Economically Disadvantaged Enrollment (%)	Students with Disabilities Enrollment (%)	Students Per Teacher	Operating Expenditures ($ Per Student)	Instructional Expenditures ($ Per Student)
Fort Cherry School District	69.2	67.2	1,325	28.7	13.1	14.7	8,169	4,792
Fox Chapel Area School District	85.1	82.5	4,644	9.7	11.5	12.4	11,285	7,392
Franklin Regional School District	85.2	85.1	3,789	3.8	10.7	16.3	7,972	5,130
Gateway School District	71.4	67.4	4,432	20.1	14.6	14.6	10,726	6,853
Greater Latrobe School District	81.9	84.8	4,322	20.1	10.2	18	7,003	4,407
Greensburg Salem School District	81.1	86.9	3,506	35.7	11.1	18.1	7,429	4,622
Hampton Township School District	90.2	87.8	3,219	5.6	11.2	16.2	8,886	5,837
Hempfield Area School District	82.4	82.3	6,616	14.9	11	16.1	8,445	5,553
Highlands School District	70.3	74.5	2,748	40.7	17.7	13.2	9,935	6,122
Jeannette City School District	74	75.2	1,460	47.9	15.2	17.2	7,301	4,216
Keystone Oaks School District	76.1	71.3	2,537	21.7	12.6	15.1	10,226	6,159
Kiski Area School District	83.1	80	4,502	25.8	13	19.2	7,418	4,335
Ligonier Valley School District	76.9	74.7	2,136	30.2	13	17.7	8,347	4,544

Name	Reading Proficiency (%)	Math Proficiency (%)	Enrollment	Economically Disadvantaged Enrollment (%)	Students with Disabilities Enrollment (%)	Students Per Teacher	Operating Expenditures ($ Per Student)	Instructional Expenditures ($ Per Student)
McGuffey School District	66.1	67.8	2,357	20.7	12.9	15.8	8,445	5,316
McKeesport Area School District	50.9	53.2	4,704	55.9	16.7	16.1	9,060	5,794
Monessen City School District	57.5	56.3	1,096	58.7	13.1	14.8	8,771	5,354
Montour School District	76.5	79.8	3,332	5.4	12.9	15.6	9,760	6,097
Moon Area School District	82.1	78.3	3,751	8.1	14.2	14.3	9,646	6,272
Mount Pleasant Area School District	73.3	72.3	2,548	29	15.1	17.6	7,635	4,427
Mt Lebanon School District	91.4	90.6	5,551	0.7	10.8	14.9	9,694	6,102
New Kensington-Arnold School District	56.9	60.3	2,573	46.7	17.7	16.4	7,258	4,468
North Allegheny School District	89.3	88.8	8,185	2.2	9.8	14.8	10,211	6,658
North Hills School District	82.3	84.6	4,859	12.6	12.1	14.7	10,274	6,577
Northgate School District	75.1	77.9	1,526	34.3	13.4	14.1	8,868	5,806
Norwin School District	83.1	82.9	5,205	11.7	11.7	18.9	7,059	4,206
Penn Hills School District	55.7	53.2	5,891	33.7	14.4	13.4	9,033	5,529

Name	Reading Proficiency (%)	Math Proficiency (%)	Enrollment	Economically Disadvantaged Enrollment (%)	Students with Disabilities Enrollment (%)	Students Per Teacher	Operating Expenditures ($ Per Student)	Instructional Expenditures ($ Per Student)
Penn-Trafford School District	85.4	83.5	4,769	8.7	9.2	19.2	6,507	4,066
Peters Township School District	89.1	87.1	3,937	2	8.4	17.8	7,547	4,743
Pine-Richland School District	84.8	84.4	3,715	3.3	11.2	14.2	9,171	6,028
Pittsburgh School District	52	55.5	34,658	60.9	18	13.6	12,242	6,458
Plum Borough School District	78.8	79.2	4,397	10	8.5	16.9	8,071	5,251
Quaker Valley School District	81.6	85.9	1,962	10.8	12.6	14.5	12,075	6,734
Ringgold School District	58	57.2	3,755	37.1	12.9	16.3	7,434	4,853
Riverview School District	76.6	75.7	1,274	26.8	15.2	13.1	9,303	5,938
Shaler Area School District	73.5	71.8	5,595	15.8	18	14.7	8,896	5,786
South Allegheny School District	58.6	56.1	1,834	20.3	13.7	16.1	7,643	4,664
South Fayette Township School District	84.8	89.1	1,868	7.2	9.3	15.4	9,540	5,584
South Park School District	75.9	72.9	2,238	6.4	10.1	18.8	8,062	4,856
Southmoreland School District	66.4	63.5	2,322	37.3	18	16.6	7,789	4,967

Name	Reading Proficiency (%)	Math Proficiency (%)	Enrollment	Economically Disadvantaged Enrollment (%)	Students with Disabilities Enrollment (%)	Students Per Teacher	Operating Expenditures ($ Per Student)	Instructional Expenditures ($ Per Student)
Steel Valley School District	58.4	65.2	2,116	40.5	13.3	15.2	9,088	6,203
Sto-Rox School District	35.9	39.1	1,528	68.7	23.4	14	10,949	6,449
Trinity Area School District	72.5	71	3,784	17.9	13.7	16.3	8,097	5,032
Upper Saint Clair School District	91.3	91.8	4,127	1.3	10.4	15.9	10,299	6,509
Washington School District	54.3	56.6	2,083	11.1	19.1	13.8	9,050	5,918
West Allegheny School District	80.7	77.4	3,204	15.6	12.9	14.7	10,056	5,942
West Jefferson Hills School District	82.4	82.2	2,911	7.8	11	18.2	8,315	5,052
West Mifflin Area School District	62.2	59.7	3,301	25.9	13.1	18.3	8,317	4,925
Wilkinsburg Borough School District	31.6	35.9	1,661	79.8	25.4	10.9	12,662	7,823
Woodland Hills School District	54	54.9	5,797	49.3	16.3	15.9	9,791	5,994
Yough School District	69.3	68.2	2,592	30.9	12.9	17.9	7,553	4,962

APPENDIX C

New Teacher Induction Survey: Outline of Major Topics of Selected Authors from the Literature Review in Summary Form (not inclusive)

Wong & Wong, 2001:

- 3 purposes of induction:
    1. to reduce the intensity of transition into teaching
    2. to help improve teaching effectiveness
    3. to increase the retention of greater numbers of highly qualified teachers
- new teachers expected to perform full complement of duties immediately while learning them at the same time
- procedures
    1. dismissal at the end of a period or day
    2. quieting a class
    3. start of a period or day
    4. students seeking help
    5. movement of students
    6. movement of papers

Breaux & Wong, 2003:

- having a new teacher survey to assess their needs
- becoming acculturated to school (4-5 days before school begins)
- new teacher study groups
- mentoring
- opportunities to visit other classrooms
- having a "start-of-school" checklist
- availability of experienced colleagues
- colleagues who will take new teachers' daily dilemmas seriously
- being observed by/sessions with other experienced teachers
- being observed by/sessions with the superintendent
- being observed by/sessions with principals
- sustained, school-based professional development
- effective classroom management procedures and routines
- effective instructional practices
- understanding of school community
- lifelong learning opportunities
- professional growth opportunities
- use of demonstration classrooms
- professional attire
- working with parents
- student discipline
- assessment techniques
- bus tour of school district

- support group meetings
- classroom management issues:
    1. how to set up a classroom management plan
    2. structuring the first day of school
    3. communicating effectively with students
    4. defusing potential discipline problems
- dealing with negative coworkers
- treating all students with dignity
- relating lessons to real life
- using cooperative learning
- encouraging active student participation
- communicating with parents effectively
- structuring bellwork
- how to maintain a positive attitude
- learning organizational culture
- locating materials and other resources
- special education issues
- motivating students
- individual differences
- familiarity with existing materials
- district policy
- building policy

Danielson, 1996:

- 4 domains of teaching responsibility:
    1. planning and preparation
        a. demonstrating knowledge of content and pedagogy
        b. demonstrating knowledge of students
        c. selecting instructional goals
        d. knowledge of teaching resources
        e. designing coherent instruction
        f. assessing student learning
    2. the classroom environment
        a. creating an environment of respect and rapport
        b. establishing a culture for learning
        c. managing classroom procedures
            1) instructional groups
            2) transition
            3) materials and supplies
            4) noninstructional duties
            5) supervision of volunteers and paraprofessionals
        d. managing student behavior
        e. organizing physical space

3. instruction
    a. communicating clearly and accurately
    b. using questioning and discussion techniques in student participation
    c. engaging students in learning
    d. providing feedback to students
    e. flexibility and responsiveness
4. professional responsibilities
    a. reflecting on teaching
    b. maintaining accurate records
    c. communicating with families
    d. contributing to the school and district
        1) relationships with colleagues
        2) service to the school
    e. growing and developing professionally
    f. showing professionalism
    g. decision-making

- mentoring

Tickle, 2000:

- knowledge of professional practice
- opportunity for supporting professional learning
- time to access professional learning opportunities
- facing aspects of teaching which were never dealt with or never came up in training
- disruptions that came with the shift from studenthood to being a full-time teacher
- ongoing assessment of professional performance
- focus groups
- social/moral theory
- subject content
- pedagogical content
- pedagogical methods
- lesson clarity
- instructional variety
- effective time management
- high student levels of time on task
- using and incorporating pupil ideas
- appropriate and varied questioning techniques
- probing for knowledge
- high expectations of what pupils can achieve
- setting tasks for whole-class, individual, and group work
- setting clear targets for students' learning
- ensuring that students are aware of the substance and purpose of what they are being asked to do
- have a working knowledge and understanding of teachers' legal liabilities and responsibilities
- role and purpose of school governing bodies

Villani (2002):

- managing the classroom
- acquiring information about the school system
- obtaining instructional resources and materials
- planning, organizing, and managing instruction as well as professional responsibilities
- assessing students
- evaluating student progress
- motivating students
- using effective teaching methods
- dealing with individual students' needs, interests, abilities, and problems
- communicating effectively:
    1. colleagues
    2. administrators
    3. supervisors
    4. parents
- adjusting to the teaching environment and role
- cognitive coaching
- having confidence with a mentor

Bartell (2005):

- experiencing success
- focusing on "survival level" of teacher development
- categories:
    1. procedural
    2. managerial
        a. classroom management
        b. time management
        c. getting materials and supplies
        d. scheduling
        e. grading practices
        f. keeping records
    3. psychological
    4. instructional
    5. professional
    6. cultural
    7. political
        a. personal
        b. organizational
        c. inpact of teacher unions
- lesson plan format
- attending workshops and/or conferences
- clarity about the purpose and intended outcomes of the induction program
- leadership and administration of the induction program
- individual follow-up of induction program by experienced educators so that new teachers learn to use new skills effectively in their classrooms

- class size
- specific suggestions from observations about what can be done better
- evaluating the work of mentors and new teachers
- how new teacher progress will be assessed

Breaux (2003):

- induction categories:
    1. classroom management
    2. planning
    3. instruction
    4. professionalism
    5. motivation and rapport
    6. a teacher's influence
- effectively handling discipline problems
- dealing with difficult students
- dealing with difficult coworkers
- effective planning
- time management
- remaining calm and professional in the face of unnerving situations
- utilizing the most effective teaching strategies
- accommodating individual differences in students
- engaging students in critical thinking
- being organized and well-prepared
- avoiding "down-time" strategies
- organization
    1. room
    2. environment
- accurate documentation
- providing a plan for substitute teachers
- learning to quickly recover from mistakes
- relating lessons to real life
- encouraging active student participation
- setting goals for self-improvement

Danielson & McGreal (2000):

- supervisors spending contact time with each new teacher
- supervisor-teacher interactions
- informal visits and conversations
- guidance for collecting artifacts for a portfolio

Danielson (2002):

- engaging in meaningful work with colleagues to strengthen their knowledge and skills for the complex challenge of teaching
- culture of professional inquiry
- ability to observe other teachers
- study groups
- time to discuss the design and implementation of challenging lessons
- opportunities for teachers to describe their work to the faculty
- expectation of participating in school functions

McCann, Johannesses, & Ricca (2005):

- relationships with:
    1. students
    2. parents
    3. colleagues
    4. supervisors
- workload
- time management
- dealing with fatigue
- knowledge of subject/curriculum
- evaluation
- grading
- autonomy and control
- appearance and identity

Gilbert (2005):

- giving new teachers the opportunity to observe other teachers
- assigning mentors to new teachers
- providing new teachers with feedback based on classroom observations
- providing new teachers with coplanning time with other teachers
- assigning new teachers to smaller classes

Wayne, Youngs, & Fleischman (2005):

- reduced number of course preparations
- mentor in the same field
- strong communication with administrators
- time for planning and collaboration with other teachers
- strong communication with administrators
- integrating new teachers into schoolwide learning opportunities

Moir & Bloom (2003):

- mentors to:
    1. observe instruction
    2. provide feedback
    3. demonstrate teaching methods
    4. assist with lesson plans
    5. help analyze student work and achievement

Holloway (2001):

- mentor's knowledge of how to support a new teacher
- mentor's skill at providing guidance

Duck (2000):

- analyzing a range of teaching styles to find the most effective styles for beginning a teaching career
- using classroom visits and observations to assess the teaching style and classroom management preferences of practicing teachers
- participating in a support group dedicated to sharing information about successes and concerns, to effective practice, and to action research
- building on successes

U.S. Department of Education (1998):

- linking performance to high standards
- university collaboration

Dedmon (n.d.):

- orientation to school system
- orientation to specific school
- positive expectations for student success
- classroom management
- lesson design for student mastery
- discipline alternatives
- parent conferencing skills
- using test data for improving instruction
- getting students to work cooperatively
- the teacher as a professional educator
- maximizing academic learning time
- integration of technology

Bluestein (date unknown):

- identifying and considering students' needs and interests
- set of "emerging plans" – quick and easy backups for when things don't go as expected

Grossman & Thompson (2004):

- constructing approaches to classroom management
- ways of teaching specific subject matter
- issues relating to themselves and their own inadequacy

Israel (2002):

- mentoring:
    1. qualified
    2. cognitive coaching
- support improvement of teaching practice at teachers' individual points of need
- trusting the mentor

ERIC Clearinghouse on Teacher Education (1986):

- support of school norms and the general conformity of teacher performance to these norms
- understanding that the induction training is crucial to their future success
- induction process is divided into progressive stages of achievement
- mutual support within peer groups
- long-term goals
- administratively-set expectations and norms of teacher conduct are clearly articulated and disseminated
- assimilating a professional vocabulary
- receiving supervision
- receiving coaching
- receiving demonstration
- receiving assessment
- supervision is distributed throughout the faculty in an organized, consistent, and continuous program

National Education Association (2002):

- introduced induction with a new teacher orientation
- supportive of collaborative learning
- use of technology
- taking a tour of the district
- professional development exclusively for new teachers
- good resource materials
- peer mentoring
- knowledge of what to expect
- participation in decision-making
- performance feedback
- emotional support
- observing other teachers teach
- discussing their needs with others
- handbooks with key information

- instructional techniques and management routines
- collaboration and cooperative teaching
- lesson planning
- planning for a substitute teacher
- large-group, small-group, and one-on-one instruction
- behavior management
- developing and administering informal classroom assessments
- planning instructional units
- planning and producing instructional materials
- planning for students with special needs
- parent conferencing and communication
- dealing with crises/crisis management
- establishing rapport with faculty and staff
- understanding of teaching styles
- understanding of learning styles
- understanding of cultural and ethnic differences
- ability to set appropriate levels of expectations for student achievement

Berry, Hopkins-Thompson, & Hoke (2002):

- opportunities to observe and analyze good teaching in real classrooms
- transferring the acquired knowledge, skills, beliefs, and attitudes needed to improve student learning
- trained mentor giving ongoing guidance and assessment
- reduced work load
- including well-designed assessment and support components in the induction program
- providing a network of new and experienced teachers with whom they can share concerns, discuss issues, and explore solutions
- learning to make impromptu responses
- providing specific expectations
- the rites and rituals of the organization
- transferring the acquired knowledge, skills, beliefs, and attitudes needed to succeed
- assessing new teachers with formal evaluation that links their teaching to student achievement trough observations and portfolios, is tied to state standards, and has implications for certification or continued employment

APPENDIX D

New Teacher Induction Survey: Working Files/Iterations of Narrowing, Combining, and Deleting Survey Items

Iteration I

Interactions & Communication

new teacher study groups
opportunities to visit other classrooms
availability of experienced colleagues
colleagues who will take new teachers' daily dilemmas seriously
working with parents
support group meetings
dealing with negative coworkers
focus groups
motivation and rapport
dealing with difficult coworkers
supervisors spending contact time with each new teacher
supervisor-teacher interactions
engaging in meaningful work with colleagues
study groups
opportunities for teachers to describe their work to the faculty
relationships with students:
relationships with parents:
relationships with colleagues:
relationships with supervisors:
providing new teachers with coplanning time with other teachers
mentor in the same field
integrating new teachers into schoolwide learning opportunities
mentor's knowledge of how to support a new teacher
mentor's skill at providing guidance
participating in a support group dedicated to sharing information about successes and concerns, to effective practice, and to action research
university collaboration
parent conferencing skills
qualified mentoring:
cognitive coaching
support improvement of teaching practice at teachers' individual points of need
trusting the mentor
mutual support within peer groups
peer mentoring
participation in decision-making
discussing their needs with others

parent conferencing and communication
establishing rapport with faculty and staff
trained mentor giving ongoing guidance and assessment
providing a network of new and experienced teachers with whom they can share concerns, discuss issues, and explore solutions
learning how to interact with parents
learning how to interact with administrators
learning how to interact with other teachers
being introduced to the faculty
bus tour of school district
communicating effectively with students
communicating with parents effectively
communicating clearly and accurately
communicating with families
communicating effectively with colleagues:
communicating effectively with administrators:
communicating effectively with supervisors:
communicating effectively with parents:
strong communication with administrators

Procedural

dismissal at the end of a period or day
start of a period or day
movement of students
movement of papers
locating materials and other resources
district policy
building policy
transition
obtaining instructional resources and materials
organizing instruction
procedures
assigning new teachers to smaller classes
reduced number of course preparations
handbooks with key information
reduced work load
being introduced to school facilities

Managerial

new teachers expected to perform full complement of duties immediately while learning them at the same time
quieting a class
having a “start-of-school” checklist
effective classroom management procedures and routines
student discipline
defusing potential discipline problems
familiarity with existing materials
managing classroom procedures
instructional groups
materials and supplies
noninstructional duties
supervision of volunteers and paraprofessionals
organizing physical space
maintaining accurate records
decision-making
disruptions that came with the shift from studenthood to being a full-time teacher
effective time management
high student levels of time on task
setting tasks for whole-class, individual, and group work
managing the classroom
managing instruction
managerial
classroom management
time management
getting materials and supplies
scheduling
grading practices
keeping records
class size
classroom management
effectively handling discipline problems
dealing with difficult students
time management
being organized
organization
room organization
environment organization
accurate documentation
workload
time management
autonomy and control
classroom management
discipline alternatives

getting students to work cooperatively
constructing approaches to classroom management
behavior management
dealing with crises/crisis management
the induction program addressing classroom management (for example, keeping students on task, reinforcement techniques, closure, etc.).
the induction program addressing school and district procedures for student discipline

Psychological

to reduce the intensity of transition into teaching
how to maintain a positive attitude
reflecting on teaching
high expectations of what pupils can achieve
motivating students
having confidence with a mentor
experiencing success
psychological
a teacher's influence
remaining calm and professional in the face of unnerving situations
learning to quickly recover from mistakes
dealing with fatigue
building on successes
issues relating to themselves and their own inadequacy
emotional support
the new teacher feeling confident as a teacher

Instructional

to help improve teaching effectiveness
effective instructional practices
use of demonstration classrooms
assessment techniques
relating lessons to real life
using cooperative learning
encouraging active student participation
special education issues
motivating students
knowledge of teaching resources
assessing student learning
the classroom environment
managing student behavior
instruction

using questioning and discussion techniques in student participation
engaging students in learning
providing feedback to students
flexibility and responsiveness
subject content
pedagogical content
pedagogical methods
appropriate and varied questioning techniques
probing for knowledge
setting clear targets for students' learning
assessing students
evaluating student progress
using effective teaching methods
instructional
lesson plan format
planning
instruction
utilizing the most effective teaching strategies
engaging students in critical thinking
relating lessons to real life
encouraging active student participation
time to discuss the design and implementation of challenging lessons
knowledge of subject/curriculum
grading
mentors to demonstrate teaching methods:
mentors to assist with lesson plans:
analyzing a range of teaching styles to find the most effective styles for beginning a teaching career
linking performance to high standards
maximizing academic learning time
integration of technology
ways of teaching specific subject matter
supportive of collaborative learning
use of technology
good resource materials
instructional techniques and management routines
collaboration and cooperative teaching
large-group, small-group, and one-on-one instruction
developing and administering informal classroom assessments
understanding of teaching styles
understanding of learning styles
ability to set appropriate levels of expectations for student achievement
transferring the acquired knowledge, skills, beliefs, and attitudes needed to improve student learning
learning to make impromptu responses
providing specific expectations

learning how to use data on student assessment to improve instruction
the induction program addressing a variety of teaching techniques
the induction program addressing a variety of student evaluation processes

Professional & Support

mentoring
sustained, school-based professional development
lifelong learning opportunities
professional growth opportunities
professional attire
demonstrating knowledge of content and pedagogy
demonstrating knowledge of students
professional responsibilities
contributing to the school and district
relationships with colleagues
service to the school
growing and developing professionally
showing professionalism
mentoring
knowledge of professional practice
ongoing assessment of professional performance
have a working knowledge and understanding of teachers' legal liabilities and responsibilities
professional responsibilities
professional
attending workshops and/or conferences
professionalism
setting goals for self-improvement
guidance for collecting artifacts for a portfolio
strengthen their knowledge and skills for the complex challenge of teaching
culture of professional inquiry
expectation of participating in school functions
appearance and identity
the teacher as a professional educator
administratively-set expectations and norms of teacher conduct are clearly articulated and disseminated
assimilating a professional vocabulary
knowledge of what to expect
transferring the acquired knowledge, skills, beliefs, and attitudes needed to succeed
becoming familiar with proper teacher conduct
learning what it means to be a professional
learning to possess a professional vocabulary

Cultural

becoming acculturated to school (4-5 days before school begins)
understanding of school community
learning organizational culture
acquiring information about the school system
adjusting to the teaching environment and role
focusing on "survival level" of teacher development
cultural
orientation to school system
orientation to specific school
support of school norms and the general conformity of teacher performance to these norms
taking a tour of the district
understanding of cultural and ethnic differences
the rites and rituals of the organization
new teachers knowing what is expected of them in their school district for success
new teachers knowing what is expected of them in their school building for success
the new teacher feeling comfortable at his or her school

Political

role and purpose of school governing bodies
political
personal
organizational
impact of teacher unions

Observations & Feedback

being observed by/sessions with other experienced teachers
being observed by/sessions with the superintendent
being observed by/sessions with principals
cognitive coaching
specific suggestions from observations about what can be done better
evaluating the work of mentors and new teachers
how new teacher progress will be assessed
informal visits and conversations
ability to observe other teachers
evaluation
giving new teachers the opportunity to observe other teachers
assigning mentors to new teachers
providing new teachers with feedback based on classroom observations

mentors to observe instruction:
mentors to provide feedback:
mentors to help analyze student work and achievement:
using classroom visits and observations to assess the teaching style and classroom management preferences of practicing teachers
receiving supervision
receiving coaching
receiving demonstration
receiving assessment
supervision is distributed throughout the faculty in an organized, consistent, and continuous program
performance feedback
observing other teachers teach
opportunities to observe and analyze good teaching in real classrooms
assessing new teachers with formal evaluation that links their teaching to student achievement trough observations and portfolios, is tied to state standards, and has implications for certification or continued employment
observing other teachers' classes
the school district knowing what is going on in new teachers' classes
receiving coaching during classroom instruction
demonstration of a model lesson from an expert teacher
receiving formal written evaluations from an administrator
receiving informal administrative feedback

Structure of Induction Program

having a new teacher survey to assess their needs
opportunity for supporting professional learning
time to access professional learning opportunities
facing aspects of teaching which were never dealt with or never came up in training
clarity about the purpose and intended outcomes of the induction program
leadership and administration of the induction program
individual follow-up of induction program by experienced educators so that new teachers learn to use new skills effectively in their classrooms
time for collaboration with other teachers
understanding that the induction training is crucial to their future success
induction process is divided into progressive stages of achievement
introduced induction with a new teacher orientation
professional development exclusively for new teachers
including well-designed assessment and support components in the induction program
the responsibility of new teacher supervision being distributed throughout the faculty
the new teacher induction program addressing long-term career goals
the new teacher induction program addressing the immediate needs of new teachers
the new teacher induction program being divided into progressive stages of achievement

the induction program consisting primarily of formal seminars
the induction program consisting primarily of informal workshops

Student Needs

students seeking help
treating all students with dignity
individual differences
creating an environment of respect and rapport
establishing a culture for learning
using and incorporating pupil ideas
ensuring that students are aware of the substance and purpose of what they are being asked to do
dealing with individual students' needs, interests, abilities, and problems
accommodating individual differences in students
positive expectations for student success
identifying and considering students' needs and interests
planning for students with special needs

Planning

how to set up a classroom management plan
structuring the first day of school
structuring bellwork
planning and preparation
selecting instructional goals
designing coherent instruction
lesson clarity
instructional variety
planning instruction
effective planning
being well-prepared
avoiding "down-time" strategies
providing a plan for substitute teachers
time for planning with other teachers
lesson design for student mastery
using test data for improving instruction
set of "emerging plans" – quick and easy backups for when things don't go as expected
long-term goals
lesson planning
planning for a substitute teacher
planning instructional units
planning and producing instructional materials

Open-Ended/Interview Questions

to increase the retention of greater numbers of highly qualified teachers
social/moral theory

Iteration II

Interactions & Communication

new teacher study groups, support groups, focus groups, peer groups
providing new teachers with coplanning time with other teachers
participating in a support group dedicated to sharing information about successes and concerns, to effective practice, and to action research
discussing their needs with others
providing a network of new and experienced teachers with whom they can share concerns, discuss issues, and explore solutions
opportunities to visit other classrooms
availability of experienced colleagues & colleagues who will take new teachers' daily dilemmas seriously
opportunities for teachers to describe their work to the faculty
cognitive coaching
support improvement of teaching practice at teachers' individual points of need
peer mentoring
participation in decision-making
bus tour of school district

Procedural

dismissal at the end of a period or day & start of a period or day
movement of students
movement of papers
district policy & building policy
obtaining and locating instructional resources and materials
organizing instruction
assigning new teachers to smaller classes
reduced number of course preparations
handbooks with key information
reduced work load

Managerial

new teachers expected to perform full complement of duties immediately while learning them at the same time
having a "start-of-school" checklist

the induction program addressing classroom management (for example, keeping students on task, reinforcement techniques, closure, etc.) & effective classroom management procedures and routines
the induction program addressing school and district procedures for student discipline & defusing potential discipline problems & dealing with difficult students
familiarity with existing materials and supplies
supervision of volunteers and paraprofessionals
organizing physical space & room organization & environment organization
maintaining accurate records and documentation
decision-making
effective time management
high student levels of time on task & setting tasks for whole-class, individual, and group work & getting students to work cooperatively
managing instruction
grading practices
autonomy and control
dealing with crises/crisis management

Psychological

disruptions that came with the shift from studenthood to being a full-time teacher
to reduce the intensity of transition into teaching
how to maintain a positive attitude
reflecting on teaching
high expectations of what pupils can achieve
motivating students
having confidence with a mentor & the new teacher feeling confident as a teacher
experiencing success & building on successes
remaining calm and professional in the face of unnerving situations
learning to quickly recover from mistakes
dealing with fatigue
emotional support

Instructional

effective instructional practices & pedagogical methods & using effective teaching methods & utilizing the most effective teaching strategies & instructional techniques & the induction program addressing a variety of teaching techniques
assessment techniques & assessing student learning & evaluating student progress & developing and administering informal classroom assessments & learning how to use data on student assessment to improve instruction & the induction program addressing a variety of student evaluation processes
relating lessons to real life

using cooperative learning & supportive of collaborative learning & collaboration and cooperative teaching & large-group, small-group, and one-on-one instruction
encouraging active student participation & engaging students in learning & motivating students
special education issues
knowledge of teaching resources and subject content & knowledge of subject/curriculum & ways of teaching specific subject matter
the classroom environment
using questioning and discussion techniques in student participation & appropriate and varied questioning techniques
providing feedback to students & probing for knowledge & engaging students in critical thinking
flexibility and responsiveness
pedagogical content
setting clear targets for students' learning & linking performance to high standards & ability to set appropriate levels of expectations for student achievement
time to discuss the design and implementation of challenging lessons
mentors to demonstrate teaching methods
mentors to assist with lesson plans and their format
analyzing a range of teaching styles to find the most effective styles for beginning a teaching career
maximizing academic learning time
integration of technology/use of technology
good resource materials
understanding of teaching styles
understanding of learning styles
transferring the acquired knowledge, skills, beliefs, and attitudes needed to improve student learning
learning to make impromptu responses

Professional & Support

mentoring
sustained, school-based professional development & professional growth opportunities
lifelong learning opportunities
demonstrating knowledge of content and pedagogy & demonstrating knowledge of students & ongoing assessment of professional performance
professional responsibilities & appearance and identity & administratively-set expectations and norms of teacher conduct are clearly articulated and disseminated & becoming familiar with proper teacher conduct & learning what it means to be a professional & learning to possess a professional vocabulary
contributing to the school and district & expectation of participating in school functions
relationships with colleagues
knowledge of professional practice
have a working knowledge and understanding of teachers' legal liabilities and

responsibilities
attending workshops and/or conferences
setting goals for self-improvement
guidance for collecting artifacts for a portfolio
strengthen their knowledge and skills for the complex challenge of teaching
culture of professional inquiry
transferring the acquired knowledge, skills, beliefs, and attitudes needed to succeed

Cultural

becoming acculturated to school (4-5 days before school begins) & the new teacher feeling comfortable at his or her school & taking a tour of the district
understanding of school community & learning organizational culture & acquiring information about the school system & support of school norms and the general conformity of teacher performance to these norms & the rites and rituals of the organization & new teachers knowing what is expected of them in their school district for success & new teachers knowing what is expected of them in their school building for success
adjusting to the teaching environment and role
focusing on "survival level" of teacher development
orientation to school system & orientation to specific school
understanding of cultural and ethnic differences

Observations & Feedback

being observed by/sessions with other experienced teachers and mentors & receiving coaching during classroom instruction
being observed by/sessions with the superintendent and/or principals and/or other administrators & receiving formal written evaluations from an administrator
cognitive coaching
specific suggestions from observations about what can be done better & mentors to provide feedback
evaluating the work of mentors and new teachers
informal visits and conversations & receiving informal administrative feedback
assigning mentors to new teachers
providing new teachers with feedback based on classroom observations
mentors to help analyze student work and achievement
using classroom visits and observations to assess the teaching style and classroom management preferences of practicing teachers & observing other teachers teach & opportunities to observe and analyze good teaching in real classrooms & demonstration of a model lesson from an expert teacher
supervision is distributed throughout the faculty in an organized, consistent, and continuous program
assessing new teachers with formal evaluation that links their teaching to student

achievement trough observations and portfolios, is tied to state standards, and has implications for certification or continued employment
the school district knowing what is going on in new teachers' classes

Structure of Induction Program

having a new teacher survey to assess their needs
opportunity for supporting professional learning
time to access professional learning opportunities
facing aspects of teaching which were never dealt with or never came up in training
clarity about the purpose and intended outcomes of the induction program
leadership and administration of the induction program
individual follow-up of induction program by experienced educators so that new teachers learn to use new skills effectively in their classrooms
time for collaboration with other teachers
understanding that the induction training is crucial to their future success
introduced induction with a new teacher orientation
professional development exclusively for new teachers
including well-designed assessment and support components in the induction program
the responsibility of new teacher supervision being distributed throughout the faculty
the new teacher induction program addressing long-term career goals
the new teacher induction program addressing the immediate needs of new teachers
the new teacher induction program being divided into progressive stages of achievement
the induction program consisting primarily of formal seminars
the induction program consisting primarily of informal workshops

Student Needs

students seeking help
treating all students with dignity
creating an environment of respect and rapport & positive expectations for student success
establishing a culture for learning
using and incorporating pupil ideas
ensuring that students are aware of the substance and purpose of what they are being asked to do
dealing with individual students' needs, interests, abilities, and problems & accommodating individual differences in students
identifying and considering students' needs and interests & planning for students with special needs

Planning

how to set up a classroom management plan
structuring the first day of school
structuring bellwork
selecting instructional goals
designing coherent instruction & lesson clarity & instructional variety & planning instruction
avoiding "down-time" strategies & set of "emerging plans" – quick and easy backups for when things don't go as expected
providing a plan for substitute teachers
time for planning with other teachers
lesson design for student mastery
using test data for improving instruction

Open-Ended/Interview Questions

to increase the retention of greater numbers of highly qualified teachers
social/moral theory
role and purpose of school governing bodies
impact of teacher unions

Iteration III

Interactions & Communication

new teacher study groups, support groups, focus groups, peer groups; participating in a support group dedicated to sharing information about successes and concerns, to effective practice, and to action research; discussing their needs with others
providing new teachers with coplanning time with other teachers; providing a network of new and experienced teachers with whom they can share concerns, discuss issues, and explore solutions; opportunities for teachers to describe their work to the faculty
availability of experienced colleagues & colleagues who will take new teachers' daily dilemmas seriously
cognitive coaching
support improvement of teaching practice at teachers' individual points of need
peer mentoring
bus tour of school district
facing aspects of teaching which were never dealt with or never came up in training
clarity about the purpose and intended outcomes of the induction program

Procedural & Managerial

dismissal at the end of a period or day & start of a period or day; movement of students
district policy & building policy; handbooks with key information
obtaining and locating instructional resources and materials; familiarity with existing materials and supplies
organizing instruction; organizing physical space & room organization & environment organization; managing instruction
assigning new teachers to smaller classes; reduced work load; reduced number of course preparations
having a "start-of-school" checklist
the induction program addressing classroom management (for example, keeping students on task, reinforcement techniques, closure, etc.) & effective classroom management procedures and routines
the induction program addressing school and district procedures for student discipline & defusing potential discipline problems & dealing with difficult students
supervision of volunteers and paraprofessionals
maintaining accurate records and documentation
effective time management
high student levels of time on task & setting tasks for whole-class, individual, and group work & getting students to work cooperatively
dealing with crises/crisis management
the classroom environment
creating an environment of respect and rapport & positive expectations for student success
dealing with individual students' needs, interests, abilities, and problems & accommodating individual differences in students
identifying and considering students' needs and interests & planning for students with special needs
how to set up a classroom management plan
structuring the first day of school/ bellwork
avoiding "down-time" strategies & set of "emerging plans" – quick and easy backups for when things don't go as expected
providing a plan for substitute teachers

Psychological

disruptions that came with the shift from studenthood to being a full-time teacher
how to maintain a positive attitude; experiencing success & building on successes; emotional support
reflecting on teaching
high expectations of what pupils can achieve
motivating students; having confidence with a mentor & the new teacher feeling confident as a teacher
remaining calm and professional in the face of unnerving situations; learning to quickly recover from mistakes

dealing with fatigue

Instructional

effective instructional practices & pedagogical methods & using effective teaching methods & utilizing the most effective teaching strategies & instructional techniques & the induction program addressing a variety of teaching techniques
assessment techniques & assessing student learning & evaluating student progress & developing and administering informal classroom assessments & learning how to use data on student assessment to improve instruction & the induction program addressing a variety of student evaluation processes
relating lessons to real life
using cooperative learning & supportive of collaborative learning & collaboration and cooperative teaching & large-group, small-group, and one-on-one instruction
encouraging active student participation & engaging students in learning & motivating students
special education issues
knowledge of teaching resources and subject content & knowledge of subject/curriculum & ways of teaching specific subject matter; pedagogical content; analyzing a range of teaching styles to find the most effective styles for beginning a teaching career; understanding of teaching and learning styles
using questioning and discussion techniques in student participation & appropriate and varied questioning techniques
providing feedback to students & probing for knowledge & engaging students in critical thinking
setting clear targets for students' learning & linking performance to high standards & ability to set appropriate levels of expectations for student achievement
time to discuss the design and implementation of challenging lessons; maximizing academic learning time
integration of technology/use of technology
transferring the acquired knowledge, skills, beliefs, and attitudes needed to improve student learning
learning to make impromptu responses
students seeking help
using and incorporating pupil ideas
ensuring that students are aware of the substance and purpose of what they are being asked to do
lesson design for student mastery
selecting instructional goals
designing coherent instruction & lesson clarity & instructional variety & planning instruction
using test data for improving instruction

Professional & Support

mentors to demonstrate teaching methods; mentors to assist with lesson plans and their format
sustained, school-based professional development & professional growth opportunities; lifelong learning opportunities; attending workshops and/or conferences
demonstrating knowledge of content and pedagogy & demonstrating knowledge of students & ongoing assessment of professional performance; knowledge of professional practice; opportunity for supporting professional learning time to access professional learning opportunities
professional responsibilities & appearance and identity & administratively-set expectations and norms of teacher conduct are clearly articulated and disseminated & becoming familiar with proper teacher conduct & learning what it means to be a professional & learning to possess a professional vocabulary; strengthen their knowledge and skills for the complex challenge of teaching; culture of professional inquiry
contributing to the school and district & expectation of participating in school functions
relationships with colleagues
have a working knowledge and understanding of teachers' legal liabilities and responsibilities
setting goals for self-improvement; guidance for collecting artifacts for a portfolio; transferring the acquired knowledge, skills, beliefs, and attitudes needed to succeed

Cultural

becoming acculturated to school (4-5 days before school begins) & the new teacher feeling comfortable at his or her school & taking a tour of the district
understanding of school community & learning organizational culture & acquiring information about the school system & support of school norms and the general conformity of teacher performance to these norms & the rites and rituals of the organization & new teachers knowing what is expected of them in their school district for success & new teachers knowing what is expected of them in their school building for success
adjusting to the teaching environment and role
focusing on "survival level" of teacher development
orientation to school system & orientation to specific school
understanding of cultural and ethnic differences
establishing a culture for learning

Observations & Feedback

being observed by/sessions with other experienced teachers and mentors & receiving coaching during classroom instruction
being observed by/sessions with the superintendent and/or principals and/or other

administrators & receiving formal written evaluations from an administrator
cognitive coaching; specific suggestions from observations about what can be done better & mentors to provide feedback; evaluating the work of mentors and new teachers; assigning mentors to new teachers; providing new teachers with feedback based on classroom observations; mentors to help analyze student work and achievement
informal visits and conversations & receiving informal administrative feedback
using classroom visits and observations to assess the teaching style and classroom management preferences of practicing teachers & observing other teachers teach & opportunities to observe and analyze good teaching in real classrooms & demonstration of a model lesson from an expert teacher
supervision is distributed throughout the faculty in an organized, consistent, and continuous program
assessing new teachers with formal evaluation that links their teaching to student achievement trough observations and portfolios, is tied to state standards, and has implications for certification or continued employment

Structure of Induction Program

having a new teacher survey to assess their needs
leadership and administration of the induction program
individual follow-up of induction program by experienced educators so that new teachers learn to use new skills effectively in their classrooms
including well-designed assessment and support components in the induction program
the responsibility of new teacher supervision being distributed throughout the faculty
the new teacher induction program addressing long-term career goals
the new teacher induction program addressing the immediate needs of new teachers
the new teacher induction program being divided into progressive stages of achievement
the induction program consisting primarily of formal seminars
the induction program consisting primarily of informal workshops

Open-Ended/Interview Questions

to increase the retention of greater numbers of highly qualified teachers
social/moral theory
role and purpose of school governing bodies
impact of teacher unions

Iteration IV

Interactions & Communication

participating in new teacher study/support/peer/discussion groups dedicated to sharing information about successes and concerns, to effective practice, and to action research
providing new teachers with coplanning time with other teachers
availability of experienced colleagues who will take new teachers' daily dilemmas seriously
support improvement of teaching practice at teachers' individual points of need
peer mentoring
bus tour of school district
facing aspects of teaching which were never dealt with or never came up in training
clarity about the purpose and intended outcomes of the induction program

Procedural & Managerial

dismissal at the end of a period or day & start of a period or day; movement of students
district policy & building policy; handbooks with key information
obtaining and locating instructional resources and materials; familiarity with existing materials and supplies
organizing instruction; organizing physical space & room organization & environment organization; managing instruction
assigning new teachers to smaller classes; reduced work load; reduced number of course preparations
having a "start-of-school" checklist
the induction program addressing classroom management (for example, keeping students on task, reinforcement techniques, closure, etc.) & effective classroom management procedures and routines
the induction program addressing school and district procedures for student discipline & defusing potential discipline problems & dealing with difficult students
supervision of volunteers and paraprofessionals
maintaining accurate records and documentation
effective time management
high student levels of time on task & setting tasks for whole-class, individual, and group work & getting students to work cooperatively
dealing with crises/crisis management
the classroom environment
creating an environment of respect and rapport & positive expectations for student success
dealing with individual students' needs, interests, abilities, and problems & accommodating individual differences in students
identifying and considering students' needs and interests & planning for students with special needs

how to set up a classroom management plan
structuring the first day of school/bellwork
avoiding "down-time" strategies & set of "emerging plans" – quick and easy backups for when things don't go as expected
providing a plan for substitute teachers

Psychological & Cultural

disruptions that came with the shift from studenthood to being a full-time teacher
how to maintain a positive attitude; experiencing success & building on successes; emotional support
reflecting on teaching
high expectations of what pupils can achieve
motivating students; having confidence with a mentor & the new teacher feeling confident as a teacher
remaining calm and professional in the face of unnerving situations; learning to quickly recover from mistakes
dealing with fatigue
becoming acculturated to school (4-5 days before school begins) & the new teacher feeling comfortable at his or her school & taking a tour of the district
understanding of school community & learning organizational culture & acquiring information about the school system & support of school norms and the general conformity of teacher performance to these norms & the rites and rituals of the organization & new teachers knowing what is expected of them in their school district for success & new teachers knowing what is expected of them in their school building for success
adjusting to the teaching environment and role
focusing on "survival level" of teacher development
orientation to school system & orientation to specific school
understanding of cultural and ethnic differences
establishing a culture for learning

Instructional

effective instructional practices & pedagogical methods & using effective teaching methods & utilizing the most effective teaching strategies & instructional techniques & the induction program addressing a variety of teaching techniques
assessment techniques & assessing student learning & evaluating student progress & developing and administering informal classroom assessments & learning how to use data on student assessment to improve instruction & the induction program addressing a variety of student evaluation processes
relating lessons to real life
using cooperative learning & supportive of collaborative learning & collaboration and cooperative teaching & large-group, small-group, and one-on-one instruction
encouraging active student participation & engaging students in learning & motivating

students
special education issues
knowledge of teaching resources and subject content & knowledge of subject/curriculum & ways of teaching specific subject matter; pedagogical content; analyzing a range of teaching styles to find the most effective styles for beginning a teaching career; understanding of teaching and learning styles
using questioning and discussion techniques in student participation & appropriate and varied questioning techniques
providing feedback to students & probing for knowledge & engaging students in critical thinking
setting clear targets for students' learning & linking performance to high standards & ability to set appropriate levels of expectations for student achievement
time to discuss the design and implementation of challenging lessons; maximizing academic learning time
integration of technology/use of technology
transferring the acquired knowledge, skills, beliefs, and attitudes needed to improve student learning
learning to make impromptu responses
students seeking help
using and incorporating pupil ideas
ensuring that students are aware of the substance and purpose of what they are being asked to do
lesson design for student mastery
selecting instructional goals
designing coherent instruction & lesson clarity & instructional variety & planning instruction
using test data for improving instruction

Professional & Support

mentors to demonstrate teaching methods; mentors to assist with lesson plans and their format
sustained, school-based professional development & professional growth opportunities; lifelong learning opportunities; attending workshops and/or conferences
demonstrating knowledge of content and pedagogy & demonstrating knowledge of students & ongoing assessment of professional performance; knowledge of professional practice; opportunity for supporting professional learning
time to access professional learning opportunities
professional responsibilities & appearance and identity & administratively-set expectations and norms of teacher conduct are clearly articulated and disseminated & becoming familiar with proper teacher conduct & learning what it means to be a professional & learning to possess a professional vocabulary; strengthen their knowledge and skills for the complex challenge of teaching; culture of professional inquiry
contributing to the school and district & expectation of participating in school functions

relationships with colleagues
have a working knowledge and understanding of teachers' legal liabilities and responsibilities
setting goals for self-improvement; guidance for collecting artifacts for a portfolio; transferring the acquired knowledge, skills, beliefs, and attitudes needed to succeed

Observations & Feedback

being observed by/sessions with other experienced teachers and mentors & receiving coaching during classroom instruction
being observed by/sessions with the superintendent and/or principals and/or other administrators & receiving formal written evaluations from an administrator
cognitive coaching; specific suggestions from observations about what can be done better & mentors to provide feedback; evaluating the work of mentors and new teachers; assigning mentors to new teachers; providing new teachers with feedback based on classroom observations; mentors to help analyze student work and achievement
informal visits and conversations & receiving informal administrative feedback
using classroom visits and observations to assess the teaching style and classroom management preferences of practicing teachers & observing other teachers teach & opportunities to observe and analyze good teaching in real classrooms & demonstration of a model lesson from an expert teacher
supervision is distributed throughout the faculty in an organized, consistent, and continuous program
assessing new teachers with formal evaluation that links their teaching to student achievement trough observations and portfolios, is tied to state standards, and has implications for certification or continued employment

Structure of Induction Program

having a new teacher survey to assess their needs
leadership and administration of the induction program
individual follow-up of induction program by experienced educators so that new teachers learn to use new skills effectively in their classrooms
including well-designed assessment and support components in the induction program
the responsibility of new teacher supervision being distributed throughout the faculty
the new teacher induction program addressing long-term career goals
the new teacher induction program addressing the immediate needs of new teachers
the new teacher induction program being divided into progressive stages of achievement
the induction program consisting primarily of formal seminars
the induction program consisting primarily of informal workshops

Open-Ended/Interview Questions

to increase the retention of greater numbers of highly qualified teachers
role and purpose of school governing bodies
impact of teacher unions
How have your experiences in/with new teacher induction programs shaped your development?

Iteration V

Interactions & Communication

participating in new teacher study/support/peer/discussion groups dedicated to sharing information about successes and concerns, to effective practice, and to action research
providing new teachers with coplanning and mentoring time with other teachers and peers
availability of experienced colleagues who will take new teachers' daily dilemmas seriously
support improvement of teaching practice at teachers' individual points of need
bus tour of school district
facing aspects of teaching which were never dealt with or never came up in training
supervision of volunteers and paraprofessionals
clarity about the purpose and intended outcomes of the induction program

Procedural & Managerial

dismissal at the end and start of a period or day and other movement of students (fire drills, crisis drills structuring the first day of school, bell work, etc.)
handbooks with key information such as district and building policy
familiarity with locating and obtaining instructional resources and materials
planning, organizing and managing instruction, physical space, and the classroom to help create an environment of respect, rapport, and positive expectations for student success
assigning new teachers to smaller classes, reduced work loads, and reduced number of course preparations
having a "start-of-school" checklist
the induction program addressing effective classroom management procedures and routines
addressing school and district procedures for student discipline, defusing potential discipline problems, and dealing with difficult students
maintaining accurate records and documentation
effective time management with high student levels of time on task
setting tasks for whole-class, individual, cooperative, and group work

dealing with crises/crisis management
dealing with individual students' needs, interests, abilities, and problems & accommodating individual differences in students
identifying and considering students' needs and interests & planning for students with special needs
avoiding "down-time" strategies & set of "emerging plans" – quick and easy backups for when things don't go as expected
providing a plan for substitute teachers

Psychological & Cultural

adjusting to the teaching role and dealing with disruptions that came with the shift from student-hood to being a full-time teacher
how to maintain a positive attitude; experiencing success & building on successes; emotional support
high expectations of what pupils can achieve to establish a culture for learning and student motivation
having confidence with a mentor to help the new teacher feel confident as a teacher
remaining calm and professional in the face of unnerving situations; learning to quickly recover from mistakes
dealing with fatigue
becoming acculturated and oriented to school system and school building (4-5 days before school begins) to help the new teacher feel comfortable
understanding of and learning about school community, organizational culture, the school system, school norms, and the rites and rituals of the organization
new teachers knowing what is expected of them in their school district for success
new teachers knowing what is expected of them in their school building for success
focusing on "survival level" of teacher development
understanding of cultural and ethnic differences

Professional & Support

mentors to demonstrate teaching methods and to assist with lesson plans and their format
time for sustained, school-based professional development and lifelong learning opportunities, including opportunities to attend workshops and/or conferences
demonstrating knowledge of content and professional practice
ongoing formal assessment of professional performance
ongoing informal assessment of professional performance
administratively-set expectations and norms of teacher conduct professional responsibilities, appearance, conduct, and identity are clearly articulated and disseminated
learning what it means to be a professional and acquiring a professional vocabulary

strengthen their knowledge and skills for the complex challenge of teaching
culture of professional inquiry
contributing to the school and district & expectation of participating in school functions
relationships with colleagues
have a working knowledge and understanding of teachers' legal liabilities and responsibilities
setting goals for self-improvement; guidance for collecting artifacts for a portfolio; transferring the acquired knowledge, skills, beliefs, and attitudes needed to succeed

Instructional

using effective instructional practices, strategies, and techniques
knowledge of teaching resources, subject/curriculum, pedagogical content, and ways of teaching specific subject matter
analyzing and understanding a range of teaching and learning styles
assessing student learning, evaluating student progress, and developing and administering informal classroom assessments while addressing a variety of student evaluation processes
relating lessons to real life
using cooperative learning, collaboration with other teachers, and cooperative teaching
using large-group, small-group, and one-on-one instruction
encouraging active student participation for student learning and to motivate students, while using appropriate and varied questioning and discussion techniques
special education issues
providing feedback to students, probing for knowledge, and engaging students in critical thinking
setting clear targets for students' learning, linking performance to high standards, and setting appropriate levels of expectations for student achievement
time to discuss the design and implementation of challenging lessons as well as maximizing academic learning time
integration and use of technology
transferring the acquired knowledge, skills, beliefs, and attitudes needed to improve student learning
using and incorporating pupil ideas as students seek help
ensuring that students are aware of the substance and purpose of what they are being asked to do
lesson design for student mastery
selecting instructional goals
designing and planning coherent instruction with lesson clarity and instructional variety
using student assessment data for improving instruction

Structure of Induction Program

having a new teacher survey to assess their needs
individual follow-up of induction program by experienced educators so that new teachers learn to use new skills effectively in their classrooms
including well-designed assessment and support components in the induction program
the new teacher induction program addressing long-term career goals
the new teacher induction program addressing the immediate needs of new teachers
the new teacher induction program being divided into progressive stages of achievement
the induction program consisting primarily of formal seminars
the induction program consisting primarily of informal workshops

Observations & Feedback

being observed by and receiving coaching with other experienced teachers and mentors
being observed the superintendent and/or principals and/or other administrators
receiving formal written evaluations from an administrator
specific suggestions and feedback from observations about what can be done better
mentors to help analyze student work and achievement
informal visits and conversations & receiving informal administrative feedback
opportunities for classroom visits and observations of other teachers to assess the teaching style and classroom and management preferences of practicing teachers
demonstration of a model lesson from an expert teacher
supervision is distributed throughout the faculty in an organized, consistent, and continuous program
assessing new teachers with formal evaluation that links their teaching to student achievement through observations and portfolios, is tied to state standards, and has implications for certification or continued employment

Open-Ended/Interview Questions

to increase the retention of greater numbers of highly qualified teachers
role and purpose of school governing bodies
impact of teacher unions
How have your experiences in/with new teacher induction programs shaped your development?

Iteration VI

Interactions & Communication

participating in new teacher study/support/peer/discussion groups dedicated to sharing information about successes and concerns, to effective practice, and to action research

providing new teachers with coplanning and mentoring time with other teachers and peers
availability of experienced colleagues who will take new teachers' daily dilemmas seriously
support improvement of teaching practice at teachers' individual points of need
bus tour of school district
facing aspects of teaching which were never dealt with or never came up in training
supervision of volunteers and paraprofessionals
clarity about the purpose and intended outcomes of the induction program

Procedural & Managerial

movement of students (start and end of a period or day, fire drills, crisis drills, structuring the first day of school, etc.)
handbooks with key information such as district and building policy
familiarity with locating and obtaining instructional resources and materials
planning, organizing and managing instruction, physical space, and the classroom to help create an environment of respect, rapport, and positive expectations for student success
assigning new teachers to smaller classes, reduced work loads, and reduced number of course preparations
having a "start-of-school" checklist
addressing effective classroom management procedures and routines
addressing school and district procedures for student discipline, defusing potential discipline problems, and dealing with difficult students
maintaining accurate records and documentation
effective time management with high student levels of time on task
setting tasks for whole-class, individual, cooperative, and group work
dealing with crises/crisis management
identifying and dealing with individual students' needs, interests, abilities, and problems
working with special needs students
avoiding "down-time" strategies & set of "emerging plans" – quick and easy backups for when things don't go as expected
providing a plan for substitute teachers

Psychological & Cultural

adjusting to the teaching role and dealing with disruptions that came with the shift from student-hood to being a full-time teacher
maintaining a positive attitude, experiencing and building on successes, and receiving emotional support
high expectations of what pupils can achieve to establish a culture for learning and student motivation
having confidence with a mentor to help the new teacher feel confident as a teacher

remaining calm and professional in the face of unnerving situations while learning to quickly recover from mistakes
dealing with fatigue
becoming acculturated and oriented to school system and school building (4-5 days before school begins) to help the new teacher feel comfortable understanding of and learning about school community, organizational culture, the school system, school norms, and the rites and rituals of the organization
new teachers knowing what is expected of them for success
focusing on "survival level" of teacher development
understanding of cultural and ethnic differences

Professional & Support

mentors to demonstrate teaching methods and to assist with lesson plans and their format
time for sustained, school-based professional development and lifelong learning opportunities, including opportunities to attend workshops and/or conferences
demonstrating knowledge of content and professional practice while strengthening knowledge and skills for the complex challenge of teaching
ongoing formal assessment of professional performance
ongoing informal assessment of professional performance
administratively-set expectations and norms of teacher conduct professional responsibilities, appearance, conduct, and identity are clearly articulated and disseminated
learning what it means to be a professional and acquiring a professional vocabulary
culture of professional inquiry
contributing to the school and district and participating in school functions
relationships with colleagues
have a working knowledge and understanding of teachers' legal liabilities and responsibilities
setting goals for self-improvement, receiving guidance for collecting artifacts for a portfolio, and transferring the acquired knowledge, skills, beliefs, and attitudes needed to succeed

Instructional

using effective instructional practices, strategies, and techniques, and selecting instructional goals
knowledge of teaching resources, subject/curriculum, pedagogical content, and ways of teaching specific subject matter
analyzing and understanding a range of teaching and learning styles
assessing student learning, evaluating student progress, and developing and administering informal classroom assessments while addressing a variety of student evaluation processes using student assessment data to improve instruction

relating lessons to real life
using cooperative learning, collaboration with other teachers, and cooperative teaching
using large-group, small-group, and one-on-one instruction
encouraging active student participation for student learning and to motivate students, while using appropriate and varied questioning and discussion techniques
special education issues
providing feedback to students, probing for knowledge, and engaging students in critical thinking
setting clear targets for students' learning, linking performance to high standards, and setting appropriate levels of expectations for student achievement
time to discuss the design and implementation of challenging lessons as well as
maximizing academic learning time, lesson design for student mastery, and designing and planning coherent instruction with lesson clarity and instructional variety
integration and use of technology
transferring the acquired knowledge, skills, beliefs, and attitudes needed to improve student learning
using and incorporating pupil ideas as students seek help
ensuring that students are aware of the substance and purpose of what they are being asked to do

Structure of Induction Program

having a new teacher survey to assess their needs
individual follow-up of induction program by experienced educators so that new teachers learn to use new skills effectively in their classrooms
including well-designed assessment and support components in the induction program
the new teacher induction program addressing long-term career goals
the new teacher induction program addressing the immediate needs of new teachers
the new teacher induction program being divided into progressive stages of achievement
the induction program consisting primarily of formal seminars
the induction program consisting primarily of informal workshops

Observations & Feedback

being observed by and receiving coaching with other experienced teachers and mentors
being observed by the superintendent and/or principals and/or other administrators
receiving formal written evaluations from an administrator
specific suggestions and feedback from observations about what can be done better
mentors to help analyze student work and achievement
informal visits and conversations and receiving informal administrative feedback
opportunities for classroom visits and observations of other teachers to assess the teaching style and classroom and management preferences of practicing teachers
demonstration of a model lesson from an expert teacher
supervision is distributed throughout the faculty in an organized, consistent, and continuous program

assessing new teachers with formal evaluation that links their teaching to student achievement through observations and portfolios, is tied to state standards, and has implications for certification or continued employment

Open-Ended/Interview Questions

to increase the retention of greater numbers of highly qualified teachers
role and purpose of school governing bodies
impact of teacher unions
How have your experiences in/with new teacher induction programs shaped your development?

Iteration VII

Procedural & Managerial

movement of students (start and end of a period or day, fire drills, crisis drills, structuring the first day of school, etc.)
familiarity with locating and obtaining instructional resources and materials
planning, organizing and managing instruction, physical space, and the classroom to help create an environment of respect, rapport, and positive expectations for student success
assigning new teachers to smaller classes, reduced work loads, and reduced number of course preparations
having a "start-of-school" checklist
addressing effective classroom management procedures and routines
addressing school and district procedures for student discipline, defusing potential discipline problems, and dealing with difficult students
maintaining accurate records and documentation
effective time management with high student levels of time on task
setting tasks for whole-class, individual, cooperative, and group work
dealing with crises/crisis management
identifying and dealing with individual students' needs, interests, abilities, and problems
working with special needs students
avoiding "down-time" strategies & set of "emerging plans" – quick and easy backups for when things don't go as expected
providing a plan for substitute teachers

Instructional

using effective instructional practices, strategies, and techniques, and selecting instructional goals
knowledge of teaching resources, subject/curriculum, pedagogical content, and ways of

teaching specific subject matter
analyzing and understanding a range of teaching and learning styles
assessing student learning, evaluating student progress, and developing and administering informal classroom assessments while addressing a variety of student evaluation processes using student assessment data to improve instruction
relating lessons to real life
using cooperative learning, collaboration with other teachers, and cooperative teaching
using large-group, small-group, and one-on-one instruction
encouraging active student participation for student learning and to motivate students, while using appropriate and varied questioning and discussion techniques
special education issues
providing feedback to students, probing for knowledge, and engaging students in critical thinking
setting clear targets for students' learning, linking performance to high standards, and setting appropriate levels of expectations for student achievement
time to discuss the design and implementation of challenging lessons as well as
maximizing academic learning time, lesson design for student mastery, and designing and planning coherent instruction with lesson clarity and instructional variety
integration and use of technology
transferring the acquired knowledge, skills, beliefs, and attitudes needed to improve student learning
using and incorporating pupil ideas as students seek help
ensuring that students are aware of the substance and purpose of what they are being asked to do

Open-Ended/Interview Questions

to increase the retention of greater numbers of highly qualified teachers
role and purpose of school governing bodies
impact of teacher unions
How have your experiences in/with new teacher induction programs shaped your development?
What changes have new teachers made in their practices as a result of participating in their new teacher induction programs?

Iteration VIII

Instructional

using effective instructional practices, strategies, and techniques, and selecting instructional goals
knowledge of teaching resources, subject/curriculum, pedagogical content, and ways of teaching specific subject matter
analyzing and understanding a range of teaching and learning styles

assessing student learning, evaluating student progress, and developing and administering informal classroom assessments while addressing a variety of student evaluation processes using student assessment data to improve instruction
relating lessons to real life
using cooperative learning, collaboration with other teachers, and cooperative teaching
using large-group, small-group, and one-on-one instruction
encouraging active student participation for student learning and to motivate students, while using appropriate and varied questioning and discussion techniques
special education issues
providing feedback to students, probing for knowledge, and engaging students in critical thinking
setting clear targets for students' learning, linking performance to high standards, and setting appropriate levels of expectations for student achievement
time to discuss the design and implementation of challenging lessons as well as maximizing academic learning time, lesson design for student mastery, and designing and planning coherent instruction with lesson clarity and instructional variety
integration and use of technology
transferring the acquired knowledge, skills, beliefs, and attitudes needed to improve student learning
using and incorporating pupil ideas as students seek help
ensuring that students are aware of the substance and purpose of what they are being asked to do
planning, organizing and managing instruction, physical space, and the classroom to help create an environment of respect, rapport, and positive expectations for student success
setting tasks for whole-class, individual, cooperative, and group work

Iteration IX

Instructional

using effective instructional practices, strategies, and techniques, (i.e. cooperative teaching and learning; setting tasks for whole-class, individual, cooperative, and group work; etc.) and selecting instructional goals
knowledge of teaching resources, subject/curriculum, pedagogical content, and ways of teaching specific subject matter while transferring the acquired knowledge, skills, beliefs, and attitudes needed to improve student learning
analyzing and understanding a range of teaching and learning styles
assessing student learning, evaluating student progress, and developing and administering informal classroom assessments while addressing a variety of student evaluation processes using student assessment data to improve instruction
relating lessons to real life
encouraging active student participation for student learning and to motivate students, while using appropriate and varied questioning and discussion techniques and incorporating pupil ideas as students seek help

special education issues
providing feedback to students, probing for knowledge, and engaging students in critical thinking
setting clear targets and expectations for students' learning and achievement, linking performance to high standards, and ensuring that students are aware of the substance and purpose of what they are being asked to do
time to discuss the design and implementation of challenging lessons as well as maximizing academic learning time, lesson design for student mastery, and designing and planning coherent instruction with lesson clarity and instructional variety
integration and use of technology
planning, organizing and managing instruction, physical space, and the classroom to help create an environment of respect, rapport, and positive expectations for student success

APPENDIX E

New Teacher Induction Likert-type Survey: First and Second Drafts

Draft #1

NEW TEACHER INDUCTION SURVEY
DANIEL C. LUJETIC, DOCTORAL CANDIDATE
UNIVERSITY OF PITTSBURGH

Please indicate with a check mark which of the following best describes your current educational position:

_____ Untenured Teacher

_____ Recently Tenured Teacher (tenure acquired within the last 7 years)

_____ Veteran Tenured Teacher (tenure acquired over 7 years ago)

_____ School Administrator

Section I: INTERACTIONS & COMMUNICATION

Directions: ***Please rank each of the following statements below from 1-8, with 1 being the most important to 8 being the least important regarding new teacher induction:***

_____ Participating in new teacher study/support/peer/discussion groups dedicated to sharing information about successes and concerns, to effective practice, and to action research.

_____ Providing new teachers with co-planning and mentoring time with other teachers and peers.

_____ Availability of experienced colleagues who will take new teachers' daily dilemmas seriously.

_____ Support improvement of teaching practice at teachers' individual points of need.

_____ Bus tour of school district.

_____ Facing aspects of teaching which were never dealt with or never came up in training.

_____ Supervision of volunteers and paraprofessionals.

_____ Clarity about the purpose and intended outcomes of the induction program.

Section II: PSYCHOLOGICAL & CULTURAL

Directions: ***Please rank each of the following statements below from 1-10, with 1 being the most important to 10 being the least important regarding new teacher induction:***

_____ Adjusting to the teaching role and dealing with disruptions that came with the shift from student-hood to being a full-time teacher.

_____ Maintaining a positive attitude, experiencing and building on successes, and receiving emotional support.

_____ High expectations of what pupils can achieve to establish a culture for learning and student motivation.

_____ Having confidence with a mentor to help the new teacher feel confident as a teacher.

_____ Remaining calm and professional in the face of unnerving situations while learning to quickly recover from mistakes.

_____ Dealing with fatigue.

_____ Becoming acculturated and oriented to school system and school building (4-5 days before school begins) to help the new teacher feel comfortable understanding of and learning about school community, organizational culture, the school system, school norms, and the rites and rituals of the organization.

_____ New teachers knowing what is expected of them for success.

_____ Focusing on "survival level" of teacher development.

_____ Understanding of cultural and ethnic differences.

Section III: PROFESSIONAL & SUPPORT

Directions: ***Please rank each of the following statements below from 1-10, with 1 being the most important to 10 being the least important regarding new teacher induction:***

_____ Mentors to demonstrate teaching methods and to assist with lesson plans and their format.

_____ Time for sustained, school-based professional development and lifelong learning opportunities, including opportunities to attend workshops and/or conferences.

_____ Demonstrating knowledge of content and professional practice while

strengthening knowledge and skills for the complex challenge of teaching.

_____ Ongoing formal assessment of professional performance.

_____ Ongoing informal assessment of professional performance.

_____ Administratively-set expectations and norms of teacher conduct, professional responsibilities, appearance, conduct, and identity are clearly articulated and disseminated.

_____ Learning what it means to be a professional and acquiring a professional vocabulary.

_____ Contributing to the school and district and participating in school functions.

_____ Have a working knowledge and understanding of teachers' legal liabilities and responsibilities.

_____ Setting goals for self-improvement, receiving guidance for collecting artifacts for a portfolio, and transferring the acquired knowledge, skills, beliefs, and attitudes needed to succeed.

Section IV: STRUCTURE OF INDUCTION PROGRAM

Directions: ***Please rank each of the following statements below from 1-8, with 1 being the most important to 8 being the least important regarding new teacher induction:***

_____ Having a new teacher survey to assess needs of new teachers.

_____ Individual follow-up of induction program by experienced educators so that new teachers learn to use new skills effectively in their classrooms.

_____ Including well-designed assessment and support components in the induction program.

_____ The new teacher induction program addressing long-term career goals.

_____ The new teacher induction program addressing the immediate needs of new teachers.

_____ The new teacher induction program being divided into progressive stages of achievement.

_____ The induction program consisting primarily of formal seminars.

_____ The induction program consisting primarily of informal workshops.

Section V: OBSERVATIONS & FEEDBACK

Directions: ***Please rank each of the following statements below from 1-10, with 1 being the most important to 10 being the least important regarding new teacher induction:***

_____ Being observed by and receiving coaching with other experienced teachers and mentors.

_____ Being observed by the superintendent and/or principals and/or other administrators.

_____ Receiving formal written evaluations from an administrator.

_____ Specific suggestions and feedback from observations about what can be done better.

_____ Mentors to help analyze student work and achievement.

_____ Informal visits and conversations and receiving informal administrative feedback.

_____ Opportunities for classroom visits and observations of other teachers to assess the teaching style and classroom and management preferences of practicing teachers.

_____ Demonstration of a model lesson from an expert teacher.

_____ Supervision is distributed throughout the faculty in an organized, consistent, and continuous program.

_____ Assessing new teachers with formal evaluation that links their teaching to student achievement through observations and portfolios, is tied to state standards, and has implications for certification or continued employment.

Section VI: PROCEDURAL & MANAGERIAL

Directions: ***Please rank each of the following statements below from 1-11, with 1 being the most important to 11 being the least important regarding new teacher induction:***

_____ Movement of students (start and end of a period or day, fire drills, crisis drills, structuring the first day of school, etc.).

_____ Familiarity with locating and obtaining instructional resources and materials.

_____ Assigning new teachers to smaller classes, reduced work loads, and reduced number of course preparations.

_____ Having a “start-of-school” checklist.

_____ Addressing effective classroom management procedures and routines.

_____ Addressing school and district procedures for student discipline, defusing potential discipline problems, and dealing with difficult students.

_____ Maintaining accurate records and documentation.

_____ Effective time management with high student levels of time on task.

_____ Identifying and dealing with individual students’ needs, interests, abilities, and problems.

_____ Avoiding “down-time” strategies & set of “emerging plans” – quick and easy backups for when things don’t go as expected.

_____ Providing a plan for substitute teachers.

Section VII: INSTRUCTIONAL

Directions: ***Please rank each of the following statements below from 1-12, with 1 being the most important to 12 being the least important regarding new teacher induction:***

_____ Using effective instructional practices, strategies, and techniques, (i.e. cooperative teaching and learning; setting tasks for whole-class, individual, cooperative, and group work; etc.) and selecting instructional goals.

_____ Knowledge of teaching resources, subject/curriculum, pedagogical content, and ways of teaching specific subject matter while transferring the acquired knowledge, skills, beliefs, and attitudes needed to improve student learning.

_____ Analyzing and understanding a range of teaching and learning styles.

_____ Assessing student learning, evaluating student progress, and developing and administering informal classroom assessments while addressing a variety of student evaluation processes using student assessment data to improve instruction.

_____ Relating lessons to real life.

_____ Encouraging active student participation for student learning and to motivate students, while using appropriate and varied questioning and discussion techniques and incorporating pupil ideas as students seek help.

_____ Special education issues.

_____ Providing feedback to students, probing for knowledge, and engaging students in critical thinking.

_____ Setting clear targets and expectations for students' learning and achievement, linking performance to high standards, and ensuring that students are aware of the substance and purpose of what they are being asked to do.

_____ Time to discuss the design and implementation of challenging lessons as well as maximizing academic learning time, lesson design for student mastery, and designing and planning coherent instruction with lesson clarity and instructional variety.

_____ Integration and use of technology.

_____ Planning, organizing and managing instruction, physical space, and the classroom to help create an environment of respect, rapport, and positive expectations for student success.

Open-Ended/Interview Questions

What would be some ways that new teacher induction programs could be structured to increase the retention of greater numbers of highly qualified teachers?

What should be the role and purpose of school governing bodies in helping new teachers?

What impact do teacher unions have on new teachers?

How have your experiences in/with new teacher induction programs shaped your development?

What changes have you made in your practices as a result of participating in your new teacher induction program?

THANK YOU FOR YOUR TIME!

DRAFT #2

NEW TEACHER INDUCTION SURVEY
DANIEL C. LUJETIC, DOCTORAL CANDIDATE
UNIVERSITY OF PITTSBURGH

Please indicate with a check mark which of the following best describes your current educational position:

_____ Untenured Teacher

_____ Recently Tenured Teacher (tenure acquired within the last 7 years)

_____ Veteran Tenured Teacher (tenure acquired over 7 years ago)

_____ School Administrator

Section I: INTERACTIONS & COMMUNICATION

Directions: ***Please rank each of the following statements below from 1-8, with 1 being the most important to 8 being the least important regarding areas that should be focused upon the most in new teacher induction:***

_____ Participating in new teacher study/support/peer/discussion groups dedicated to sharing information about successes and concerns, to effective practice, and to action research.

_____ Providing new teachers with co-planning and mentoring time with other teachers and peers.

_____ Availability of experienced colleagues who will take new teachers' daily dilemmas seriously.

_____ Support improvement of teaching practice at teachers' individual points of need.

_____ Bus tour of school district.

_____ Facing aspects of teaching which were never dealt with or never came up in training.

_____ Supervision of volunteers and paraprofessionals.

_____ Clarity about the purpose and intended outcomes of the induction program.

Section II: PSYCHOLOGICAL & CULTURAL

Directions: ***Please rank each of the following statements below from 1-10, with 1 being the most important to 10 being the least important regarding areas that should be focused upon the most in new teacher induction:***

_____ Adjusting to the teaching role and dealing with disruptions that came with the shift from student-hood to being a full-time teacher.

_____ Maintaining a positive attitude, experiencing and building on successes, and receiving emotional support.

_____ High expectations of what pupils can achieve to establish a culture for learning and student motivation.

_____ Having confidence with a mentor to help the new teacher feel confident as a teacher.

_____ Remaining calm and professional in the face of unnerving situations while learning to quickly recover from mistakes.

_____ Dealing with fatigue.

_____ Becoming acculturated and oriented to school system and school building (4-5 days before school begins) to help the new teacher feel comfortable understanding of and learning about school community, organizational culture, the school system, school norms, and the rites and rituals of the organization.

_____ New teachers knowing what is expected of them for success.

_____ Focusing on "survival level" of teacher development.

_____ Understanding of cultural and ethnic differences.

Section III: PROFESSIONAL & SUPPORT

Directions: ***Please rank each of the following statements below from 1-10, with 1 being the most important to 10 being the least important regarding areas that should be focused upon the most in new teacher induction:***

_____ Mentors to demonstrate teaching methods and to assist with lesson plans and their format.

_____ Time for sustained, school-based professional development and lifelong learning opportunities, including opportunities to attend workshops and/or conferences.

_____ Demonstrating knowledge of content and professional practice while

strengthening knowledge and skills for the complex challenge of teaching.

_____ Ongoing formal assessment of professional performance.

_____ Ongoing informal assessment of professional performance.

_____ Administratively-set expectations and norms of teacher conduct, professional responsibilities, appearance, conduct, and identity.

_____ Learning what it means to be a professional and acquiring a professional vocabulary.

_____ Contributing to the school and district and participating in school functions.

_____ Have a working knowledge and understanding of teachers' legal liabilities and responsibilities.

_____ Setting goals for self-improvement, receiving guidance for collecting artifacts for a portfolio, and transferring the acquired knowledge, skills, beliefs, and attitudes needed to succeed.

Section IV: STRUCTURE OF INDUCTION PROGRAM

Directions: ***Please rank each of the following statements below from 1-8, with 1 being the most important to 8 being the least important regarding areas that should be focused upon the most in new teacher induction:***

_____ Having a new teacher survey to assess needs of new teachers.

_____ Individual follow-up of induction program by experienced educators so that new teachers learn to use new skills effectively in their classrooms.

_____ Including well-designed assessment and support components in the induction program.

_____ The new teacher induction program addressing long-term career goals.

_____ The new teacher induction program addressing the immediate needs of new teachers.

_____ The new teacher induction program being divided into progressive stages of achievement.

_____ The induction program consisting primarily of formal seminars.

_____ The induction program consisting primarily of informal workshops.

Section V: OBSERVATIONS & FEEDBACK

Directions: ***Please rank each of the following statements below from 1-10, with 1 being the most important to 10 being the least important regarding areas that should be focused upon the most in new teacher induction:***

_____ Being observed by and receiving coaching with other experienced teachers and mentors.

_____ Being observed by the superintendent and/or principals and/or other administrators.

_____ Receiving formal written evaluations from an administrator.

_____ Specific suggestions and feedback from observations about what can be done better.

_____ Mentors to help analyze student work and achievement.

_____ Informal visits and conversations and receiving informal administrative feedback.

_____ Opportunities for classroom visits and observations of other teachers to assess the teaching style and classroom and management preferences of practicing teachers.

_____ Demonstration of a model lesson from an expert teacher.

_____ Supervision is distributed throughout the faculty in an organized, consistent, and continuous program.

_____ Assessing new teachers with formal evaluation that links their teaching to student achievement through observations and portfolios, is tied to state standards, and has implications for certification or continued employment.

Section VI: PROCEDURAL & MANAGERIAL

Directions: ***Please rank each of the following statements below from 1-11, with 1 being the most important to 11 being the least important regarding areas that should be focused upon the most in new teacher induction:***

_____ Movement of students (start and end of a period or day, fire drills, crisis drills, structuring the first day of school, etc.).

_____ Familiarity with locating and obtaining instructional resources and materials.

_____ Assigning new teachers to smaller classes, reduced work loads, and reduced number of course preparations.

_____ Having a "start-of-school" checklist.

_____ Addressing effective classroom management procedures and routines.

_____ Addressing school and district procedures for student discipline, defusing potential discipline problems, and dealing with difficult students.

_____ Maintaining accurate records and documentation.

_____ Effective time management with high student levels of time on task.

_____ Identifying and dealing with individual students' needs, interests, abilities, and problems.

_____ Avoiding "down-time" strategies & set of "emerging plans" – quick and easy backups for when things don't go as expected.

_____ Providing a plan for substitute teachers.

Section VII: INSTRUCTIONAL

Directions: ***Please rank each of the following statements below from 1-12, with 1 being the most important to 12 being the least important regarding areas that should be focused upon the most in new teacher induction:***

_____ Using effective instructional practices, strategies, and techniques (i.e. cooperative teaching and learning; setting tasks for whole-class, individual, cooperative, and group work; etc.) and selecting instructional goals.

_____ Knowledge of teaching resources, subject/curriculum, pedagogical content, and ways of teaching specific subject matter while transferring the acquired knowledge, skills, beliefs, and attitudes needed to improve student learning.

_____ Analyzing and understanding a range of teaching and learning styles.

_____ Assessing student learning, evaluating student progress, and developing and administering informal classroom assessments while addressing a variety of student evaluation processes using student assessment data to improve instruction.

_____ Relating lessons to real life.

_____ Encouraging active student participation for student learning and to motivate students, while using appropriate and varied questioning and discussion techniques and incorporating pupil ideas as students seek help.

_____ Special education issues.

_____ Providing feedback to students, probing for knowledge, and engaging students in critical thinking.

_____ Setting clear targets and expectations for students' learning and achievement, linking performance to high standards, and ensuring that students are aware of the substance and purpose of what they are being asked to do.

_____ Time to discuss the design and implementation of challenging lessons as well as maximizing academic learning time, lesson design for student mastery, and designing and planning coherent instruction with lesson clarity and instructional variety.

_____ Integration and use of technology.

_____ Planning, organizing and managing instruction, physical space, and the classroom to help create an environment of respect, rapport, and positive expectations for student success.

Open-Ended/Interview Questions

How have your experiences in/with new teacher induction programs shaped your development?

What changes have you made in your practices as a result of participating in your new teacher induction program?

What would be some ways that new teacher induction programs could be structured to increase the retention of greater numbers of highly qualified teachers?

What impact do teacher unions have on new teachers?

What should be the role and purpose of school governing bodies in helping new teachers?

THANK YOU FOR YOUR TIME!

APPENDIX F
Superintendent Cover Letter

Daniel C. Lujetic
University of Pittsburgh
Administration & Policy Studies
dlujetic@gmail.com
[*date was supplied only after IRB approval was obtained*], 2007

(Dr./Mr./Ms.) Name of Superintendent
School District Name
School District Address

I am a graduate student at the University of Pittsburgh, and I am in the process of finishing my Doctorate Degree in Education. For my dissertation, I am researching new teacher induction in public schools. The purpose of this study is to compare the perspectives of new teachers, veteran teachers, and school administrators with respect to the needs of new teachers. The enclosed survey is designed to obtain information about current teacher induction programs in Southwestern Pennsylvania, particularly in Allegheny, Washington, and Westmoreland Counties.

I am asking for your written permission to offer this survey to teachers and administrators in your school district. A copy of the survey instrument is enclosed for your perusal. (The spacing has been minimized so that less paper is used.) The information collected from this survey will be anonymous both for names of participants and the name of your district, and completion of the survey is strictly voluntary. Enclosed is a self-addressed stamped postcard, or you email me at dlujetic@gmail.com if you prefer. If you give me permission, the survey is available online, and I will email the Internet address of the survey to your professional staff (http://www.surveymonkey.com/Users/98663282/Surveys/228713095506/83B046C8-2BD5-4531-91C6-660547687AFD.asp?U=228713095506).

I realize that your schedule is busy and your time is valuable. However, I hope that the few minutes needed to complete this survey will lead to more research being done in the area of new teacher induction, and ultimately, the goal is to help new teachers in ways that are even better than the ways they are being helped now. I will be glad to also share the results of my findings and conclusions of this study if you so choose. Thank you in advance for your time and consideration.

Yours truly,

Daniel C. Lujetic
Graduate Student, University of Pittsburgh

Email sent to professional staff of districts whose superintendents grant written permission to invite staff to participate in the survey

My name is Dan Lujetic, and I am currently working on finishing my doctoral degree in education at the University of Pittsburgh. The purpose of this research study is comparing and contrasting the content of new teacher induction programs, and part of this involves me collecting data via survey. The survey is designed to obtain information about current teacher induction programs in Southwestern Pennsylvania, particularly in Allegheny, Washington, and Westmoreland Counties.

I have received permission from your district superintendent to ask you if you would please take a few minutes to complete the survey. There are no foreseeable risks associated with this project, nor are there any direct benefits to you. Your participation is completely anonymous, and is easily done via the Internet, so your responses will not be identifiable in any way. Your responses are voluntary, and you may withdraw from the project at any time. Hopefully, the results of this survey will help to improve new teacher induction programs in the region.

I would appreciate your help by completing this survey; it should take only a few minutes. Just click on the link below and you will have access to the survey.

I realize your time is valuable, and I thank you for your help. I will be collecting the results on [*date will be determined pending IRB approval*]. This study is being conducted by Daniel C. Lujetic, who can be reached at dlujetic@gmail.com, if you have any questions.

http://www.surveymonkey.com/Users/98663282/Surveys/228713095506/83B046C8-2BD5-4531-91C6-660547687AFD.asp?U=228713095506

Pre-addressed stamped postcard reply for superintendents' permission to disseminate survey

_____ I, *name of superintendent* , give my permission as superintendent of *name of school district* School District

for Daniel C. Lujetic to distribute his survey regarding new teacher induction in partial fulfillment of the requirements of obtaining a Doctoral Degree.

NOTE: Non-returned postcards will be treated as if permission was not given.

APPENDIX G
FINAL NEW TEACHER INDUCTION SURVEY

Please indicate with a check mark which of the following best describes your current educational position:

_____ Untenured Teacher

_____ Recently Tenured Teacher (tenure acquired within the last 7 years)

_____ Veteran Tenured Teacher (tenure acquired over 7 years ago)

_____ School Administrator

Section I: PSYCHOLOGICAL & CULTURAL

Directions: ***Please rank each of the following statements below from 1-10, with 1 being the most important to 10 being the least important regarding areas that should be focused upon the most in new teacher induction:***

_____ Adjusting to the teaching role and dealing with the shift from student-hood to being a full-time teacher.

_____ Maintaining a positive attitude, experiencing and building on successes, and receiving emotional support.

_____ High expectations of what pupils can achieve to establish a culture for learning and student motivation.

_____ Having confidence with a mentor to help the new teacher feel confident.

_____ Remaining calm and professional in the face of unnerving situations while learning to quickly recover from mistakes.

_____ Dealing with fatigue.

_____ The new teacher becoming acculturated and oriented to school system, building, community, culture, and norms.

_____ New teachers learning what is expected of them for success.

_____ Focusing on "survival level" of teacher development.

_____ Understanding of cultural and ethnic differences.

Section II: INTERACTIONS & COMMUNICATION

Directions: ***Please rank each of the following statements below from 1-8, with 1 being the most important to 8 being the least important regarding areas that should be focused upon the most in new teacher induction:***

_____ Participating in new teacher study/support/discussion groups dedicated to sharing information about successes and concerns, to effective practice, and to action research.

_____ Providing new teachers with co-planning and mentoring time with other teachers and peers.

_____ Availability of experienced colleagues who will take new teachers' daily dilemmas seriously.

_____ Supporting improvement of teaching practice at teachers' individual points of need.

_____ Bus tour of school district.

_____ Facing aspects of teaching which were never dealt with or never came up in training.

_____ New teacher supervision of volunteers and paraprofessionals.

_____ Clarity about the purpose and intended outcomes of the induction program.

Section III: STRUCTURE OF INDUCTION PROGRAM

Directions: ***Please rank each of the following statements below from 1-8, with 1 being the most important to 8 being the least important regarding areas that should be focused upon the most in new teacher induction:***

_____ Having a new teacher survey to assess needs of new teachers.

_____ Individual follow-up of induction program by experienced educators so that new teachers learn to use new skills effectively in their classrooms.

_____ Including well-designed assessment and support components in the induction program.

_____ The new teacher induction program addressing long-term career goals.

_____ The new teacher induction program addressing the immediate needs of new teachers.

_____ The new teacher induction program being divided into progressive stages of achievement.

_____ The induction program consisting primarily of formal seminars.

_____ The induction program consisting primarily of informal workshops.

Section IV: PROFESSIONAL & SUPPORT

Directions: ***Please rank each of the following statements below from 1-10, with 1 being the most important to 10 being the least important regarding areas that should be focused upon the most in new teacher induction:***

_____ Mentors to demonstrate teaching methods and to assist with lesson plans for student mastery.

_____ Time for sustained, school-based professional development and lifelong learning opportunities, including workshops and/or conferences.

_____ Demonstrating knowledge of content and professional practice while strengthening knowledge and skills.

_____ Ongoing formal assessment of professional performance.

_____ Ongoing informal assessment of professional performance.

_____ Administratively-set expectations and norms of teacher conduct, professional responsibilities, appearance, conduct, and identity.

_____ Learning what it means to be a professional and acquiring a professional vocabulary.

_____ Contributing to the school and district and participating in school functions.

_____ Have a working knowledge and understanding of teachers' legal liabilities and responsibilities.

_____ Setting goals for self-improvement and transferring the acquired knowledge, skills, beliefs, and attitudes needed to succeed.

_____ Receiving guidance for collecting artifacts for a portfolio.

Section V: OBSERVATIONS & FEEDBACK

Directions: ***Please rank each of the following statements below from 1-10, with 1 being the most important to 10 being the least important regarding areas that should be focused upon the most in new teacher induction:***

_____ Being observed by and receiving coaching with other experienced teachers and mentors.

_____ Being observed by the superintendent, principals, and/or other administrators.

_____ Receiving formal written evaluations from an administrator that links teaching to student achievement.

_____ Specific suggestions and feedback from observations about what can be done better.

_____ Mentors to help analyze student work and achievement.

_____ Informal visits and conversations and receiving informal administrative feedback.

_____ Opportunities for classroom visits and observations of other teachers.

_____ Demonstration of a model lesson from an expert teacher.

_____ Supervision is distributed throughout the faculty in an organized, consistent, and continuous program.

Section VI: PROCEDURAL & MANAGERIAL

Directions: ***Please rank each of the following statements below from 1-11, with 1 being the most important to 11 being the least important regarding areas that should be focused upon the most in new teacher induction:***

_____ Movement of students (start and end of a period or day, fire drills, crisis drills, etc.).

_____ Familiarity with locating and obtaining instructional resources and materials.

_____ Assigning new teachers to smaller classes, reduced work loads, and reduced number of course preparations.

_____ Having a “start-of-school” checklist.

_____ Addressing effective classroom management procedures and routines.

_____ Addressing school and district procedures for student discipline, defusing

potential discipline problems, and dealing with difficult students.

_____ Maintaining accurate records and documentation.

_____ Effective time management with high student levels of time on task.

_____ Identifying and dealing with individual students' needs, interests, abilities, and problems.

_____ Avoiding "down-time" strategies and set of quick and easy backups for when things don't go as expected.

_____ Providing a plan for substitute teachers.

Section VII: INSTRUCTIONAL

Directions: ***Please rank each of the following statements below from 1-12, with 1 being the most important to 12 being the least important regarding areas that should be focused upon the most in new teacher induction:***

_____ Using effective instructional practices, strategies, and techniques, and selecting instructional goals.

_____ Knowledge of teaching resources, subject/curriculum, pedagogical content, and ways of teaching specific subject matter.

_____ Analyzing and understanding a range of teaching and learning styles.

_____ Addressing a variety of student evaluation processes using student assessment data to improve instruction.

_____ Relating lessons to real life, ensuring that students are aware of the substance and purpose of what they are being asked to do.

_____ Encouraging active student participation, using appropriate and varied questioning and discussion techniques and incorporating pupil ideas.

_____ Special education issues.

_____ Engaging students in critical thinking, probing for knowledge, and providing feedback to students.

_____ Setting clear targets and expectations for students' learning and achievement while linking performance to high standards.

_____ Maximizing academic learning time and designing and planning coherent instruction with lesson clarity and instructional variety.

_____ Integration and use of technology.

_____ Planning, organizing and managing instruction and physical space.

THANK YOU FOR YOUR TIME!

APPENDIX H
Survey Results for All Participants

Current Educational Position

Current Educational Position	Number of Respondents	Percentage of Total
Untenured Teacher	N = 83	28.14%
Recently Tenured Teacher	N = 67	22.71%
Veteran Teacher	N = 121	41.02%
School Administrator	N = 24	8.14%
TOTAL:	N = 295	

Section I: PSYCHOLOGICAL & CULTURAL

Directions: ***Please rank each of the following statements below from 1-10, with 1 being the most important to 10 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Adjusting to the teaching role and dealing with the shift from student-hood to being a full-time teacher.
B. Maintaining a positive attitude, experiencing and building on successes, and receiving emotional support.
C. High expectations of what pupils can achieve to establish a culture for learning and student motivation.
D. Having confidence with a mentor to help the new teacher feel confident.
E. Remaining calm and professional in the face of unnerving situations while learning to quickly recover from mistakes.
F. Dealing with fatigue.
G. The new teacher becoming acculturated and oriented to school system, building, community, culture, and norms.
H. New teachers learning what is expected of them for success.
I. Focusing on "survival level" of teacher development.
J. Understanding of cultural and ethnic differences.

	MOST 1	2	3	4	5	6	7	8	9	LEAST 10	Response Average
A.	35	26	32	23	25	20	24	36	31	42	5.7
B.	49	69	53	35	33	21	13	8	10	3	3.58
C.	52	39	45	50	31	23	18	21	7	8	4.06
D.	24	34	44	35	34	41	34	20	16	11	4.89
E.	33	43	44	43	44	40	24	13	5	4	4.23
F.	4	3	12	8	21	23	29	31	70	93	7.93
G.	49	36	23	38	33	36	40	19	16	3	4.54
H.	37	30	28	31	29	41	39	41	15	2	4.96
I.	7	11	9	17	14	27	39	49	61	59	7.37
J.	4	3	4	13	29	21	33	55	62	69	7.73

N = 294

Section II: INTERACTIONS & COMMUNICATION

Directions: ***Please rank each of the following statements below from 1-8, with 1 being the most important to 8 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Participating in new teacher study/support/discussion groups dedicated to sharing information about successes and concerns, to effective practice, and to action research.
B. Providing new teachers with co-planning and mentoring time with other teachers and peers.
C. Availability of experienced colleagues who will take new teachers' daily dilemmas seriously.
D. Supporting improvement of teaching practice at teachers' individual points of need.
E. Bus tour of school district.
F. Facing aspects of teaching which were never dealt with or never came up in training.
G. New teacher supervision of volunteers and paraprofessionals.
H. Clarity about the purpose and intended outcomes of the induction program.

	MOST 1	2	3	4	5	6	7	LEAST 8	Response Average
A.	65	48	48	39	27	20	11	7	3.2
B.	99	83	35	25	7	9	6	1	2.3
C.	31	61	65	48	34	10	9	7	3.35
D.	13	24	56	85	47	28	6	6	4.01
E.	0	3	5	5	13	20	41	178	7.31
F.	27	25	38	39	86	30	15	5	4.16
G.	6	8	5	10	24	63	107	42	6.26
H.	24	13	13	14	27	85	70	19	5.4

N = 265

Section III: STRUCTURE OF INDUCTION PROGRAM

Directions: ***Please rank each of the following statements below from 1-8, with 1 being the most important to 8 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Having a new teacher survey to assess needs of new teachers.
B. Individual follow-up of induction program by experienced educators so that new teachers learn to use new skills effectively in their classrooms.
C. Including well-designed assessment and support components in the induction program.
D. The new teacher induction program addressing long-term career goals.
E. The new teacher induction program addressing the immediate needs of new teachers.
F. The new teacher induction program being divided into progressive stages of achievement.
G. The induction program consisting primarily of formal seminars.
H. The induction program consisting primarily of informal workshops.

	MOST 1	2	3	4	5	6	7	LEAST 8	Response Average
A.	47	37	30	30	27	23	18	35	4.09
B.	45	45	58	22	34	18	22	3	3.45
C.	17	39	44	50	31	33	19	14	4.15
D.	5	15	16	25	33	31	62	60	5.86
E.	102	41	36	33	22	7	1	5	2.52
F.	12	38	25	39	46	49	22	16	4.55
G.	1	7	15	15	30	39	54	86	6.36
H.	18	25	23	33	24	47	49	28	5.01

N = 247

Section IV: PROFESSIONAL & SUPPORT

Directions: ***Please rank each of the following statements below from 1-10, with 1 being the most important to 10 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Mentors to demonstrate teaching methods and to assist with lesson plans for student mastery.
B. Time for sustained, school-based professional development and lifelong learning opportunities, including workshops and/or conferences.
C. Demonstrating knowledge of content and professional practice while strengthening knowledge and skills.
D. Ongoing formal assessment of professional performance.
E. Ongoing informal assessment of professional performance.
F. Administratively-set expectations and norms of teacher conduct, professional responsibilities, appearance, conduct, and identity.
G. Learning what it means to be a professional and acquiring a professional vocabulary.
H. Contributing to the school and district and participating in school functions.
I. Have a working knowledge and understanding of teachers' legal liabilities and responsibilities.
J. Setting goals for self-improvement and transferring the acquired knowledge, skills, beliefs, and attitudes needed to succeed.

	MOST 1	2	3	4	5	6	7	8	9	10	LEAST 11	Response Average
A.	87	33	21	20	13	16	4	8	4	8	5	3.29
B.	24	44	27	19	23	16	19	18	13	10	6	4.75
C.	32	23	40	36	21	14	14	14	12	11	2	4.48
D.	4	8	17	29	28	20	22	17	28	28	18	6.7
E.	8	14	28	27	41	27	24	14	18	14	4	5.58
F.	14	23	29	22	18	35	19	21	18	13	7	5.5
G.	4	8	9	10	22	28	47	28	23	28	12	7.02
H.	5	6	11	15	11	23	26	51	27	30	14	7.26
I.	9	25	17	16	21	25	23	22	38	17	6	6.14
J.	26	30	15	23	18	9	11	20	21	38	8	5.76
K.	6	5	5	2	3	6	10	6	17	22	137	9.53

N = 219

Section V: OBSERVATIONS & FEEDBACK

Directions: ***Please rank each of the following statements below from 1-10, with 1 being the most important to 10 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Being observed by and receiving coaching with other experienced teachers and mentors.
B. Being observed by the superintendent, principals, and/or other administrators.
C. Receiving formal written evaluations from an administrator that links teaching to student achievement.
D. Specific suggestions and feedback from observations about what can be done better.
E. Mentors to help analyze student work and achievement.
F. Informal visits and conversations and receiving informal administrative feedback.
G. Opportunities for classroom visits and observations of other teachers.
H. Demonstration of a model lesson from an expert teacher.
I. Supervision is distributed throughout the faculty in an organized, consistent, and continuous program.

	MOST 1	2	3	4	5	6	7	8	LEAST 9	Response Average
A.	54	33	30	20	25	11	11	11	11	3.62
B.	12	22	9	21	16	22	27	32	45	5.97
C.	6	9	17	31	18	28	34	42	21	5.92
D.	34	31	42	30	26	21	14	3	5	3.71
E.	11	16	23	21	33	34	33	19	16	5.3
F.	9	23	20	30	35	32	21	26	10	5.08
G.	33	34	26	21	22	21	21	16	12	4.28
H.	24	30	23	17	17	19	22	31	23	5
I.	23	8	16	15	14	18	23	26	63	6.12

N = 206

Section VI: PROCEDURAL & MANAGERIAL

Directions: ***Please rank each of the following statements below from 1-11, with 1 being the most important to 11 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Movement of students (start and end of a period or day, fire drills, crisis drills, etc.).
B. Familiarity with locating and obtaining instructional resources and materials.
C. Assigning new teachers to smaller classes, reduced work loads, and reduced number of course preparations.
D. Having a "start-of-school" checklist.
E. Addressing effective classroom management procedures and routines.
F. Addressing school and district procedures for student discipline, defusing potential discipline problems, and dealing with difficult students.
G. Maintaining accurate records and documentation.
H. Effective time management with high student levels of time on task.
I. Identifying and dealing with individual students' needs, interests, abilities, and problems.
J. Avoiding "down-time" strategies and set of quick and easy backups for when things don't go as expected.
K. Providing a plan for substitute teachers.

	MOST 1	2	3	4	5	6	7	8	9	10	LEAST 11	Response Average
A.	13	7	15	15	21	17	11	16	19	36	23	6.88
B.	17	20	18	17	17	22	16	19	27	16	4	5.74
C.	15	12	8	13	7	15	12	19	20	26	46	7.37
D.	30	19	22	15	18	17	18	18	15	9	12	5.25
E.	56	38	22	21	16	9	11	9	7	3	1	3.47
F.	22	37	37	17	23	19	9	9	10	5	5	4.32
G.	11	13	20	32	28	25	24	15	12	4	9	5.44
H.	8	19	16	19	22	22	32	28	15	11	1	5.78
I.	16	12	18	18	23	25	25	23	21	11	1	5.7
J.	3	13	16	21	12	17	22	22	28	29	10	6.76
K.	2	3	1	5	6	5	13	15	19	43	81	9.3

N = 193

Section VII: INSTRUCTIONAL

Directions: ***Please rank each of the following statements below from 1-12, with 1 being the most important to 12 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Using effective instructional practices, strategies, and techniques, and selecting instructional goals.

B. Knowledge of teaching resources, subject/curriculum, pedagogical content, and ways of teaching specific subject matter.

C. Analyzing and understanding a range of teaching and learning styles.

D. Addressing a variety of student evaluation processes using student assessment data to improve instruction.

E. Relating lessons to real life, ensuring that students are aware of the substance and purpose of what they are being asked to do.

F. Encouraging active student participation, using appropriate and varied questioning and discussion techniques and incorporating pupil ideas.

G. Special education issues.

H. Engaging students in critical thinking, probing for knowledge, and providing feedback to students.

I. Setting clear targets and expectations for students' learning and achievement while linking performance to high standards.

J. Maximizing academic learning time and designing and planning coherent instruction with lesson clarity and instructional variety.

K. Integration and use of technology.

L. Planning, organizing and managing instruction and physical space.

	MOST 1	2	3	4	5	6	7	8	9	10	11	LEAST 12	Response Average
A.	53	25	17	12	14	6	15	8	5	12	4	6	4.28
B.	18	34	22	18	13	11	9	15	10	5	12	10	5.25
C.	10	8	21	19	18	16	15	16	18	14	11	11	6.44
D.	4	8	15	28	15	15	21	14	21	14	12	10	6.68
E.	18	17	11	14	31	19	14	13	8	14	13	5	5.8
F.	13	21	13	12	18	29	16	11	16	10	12	6	5.95
G.	6	6	12	12	11	19	25	19	13	21	20	13	7.35
H.	8	16	16	21	12	15	24	29	13	14	4	5	6.12
I.	10	15	21	16	13	11	13	16	35	9	11	7	6.37
J.	18	16	14	13	10	13	9	16	16	32	14	6	6.51
K.	3	6	5	7	11	11	10	9	15	20	40	40	8.9
L.	16	5	10	5	11	12	6	11	7	12	24	58	8.34

N = 177

APPENDIX I
Survey Results for All Iterations of Participants

ONE STUDY GROUP ONLY RESULTS

Section I: PSYCHOLOGICAL & CULTURAL

Directions: ***Please rank each of the following statements below from 1-10, with 1 being the most important to 10 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Adjusting to the teaching role and dealing with the shift from student-hood to being a full-time teacher.
B. Maintaining a positive attitude, experiencing and building on successes, and receiving emotional support.
C. High expectations of what pupils can achieve to establish a culture for learning and student motivation.
D. Having confidence with a mentor to help the new teacher feel confident.
E. Remaining calm and professional in the face of unnerving situations while learning to quickly recover from mistakes.
F. Dealing with fatigue.
G. The new teacher becoming acculturated and oriented to school system, building, community, culture, and norms.
H. New teachers learning what is expected of them for success.
I. Focusing on "survival level" of teacher development.
J. Understanding of cultural and ethnic differences.

Response Average Ranking

	Untenured Teachers ONLY	Recently Tenured Teachers ONLY	Veteran Teachers ONLY	School Administrators ONLY
A.	5.48	6.13	5.69	5.13
B.	3.39	3.6	3.71	3.5
C.	3.53	4.48	4.33	3.5
D.	4.87	4.71	4.88	5.5
E.	4.31	3.76	4.26	5.21
F.	7.94	7.79	7.89	8.42
G.	4.63	4.55	4.42	4.71
H.	5.27	5.05	4.88	4.17
I.	7.6	7.03	7.38	7.46
J.	7.99	7.82	7.56	7.42
	N = 83	**N = 67**	**N = 121**	**N = 24**

Section II: INTERACTIONS & COMMUNICATION

Directions: ***Please rank each of the following statements below from 1-8, with 1 being the most important to 8 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Participating in new teacher study/support/discussion groups dedicated to sharing information about successes and concerns, to effective practice, and to action research.
B. Providing new teachers with co-planning and mentoring time with other teachers and peers.
C. Availability of experienced colleagues who will take new teachers' daily dilemmas seriously.
D. Supporting improvement of teaching practice at teachers' individual points of need.
E. Bus tour of school district.
F. Facing aspects of teaching which were never dealt with or never came up in training.
G. New teacher supervision of volunteers and paraprofessionals.
H. Clarity about the purpose and intended outcomes of the induction program.

Response Average Ranking

	Untenured Teachers ONLY	Recently Tenured Teachers ONLY	Veteran Teachers ONLY	School Administrators ONLY
A.	3.4	3.13	3.13	3.17
B.	2.29	2.29	2.08	3.33
C.	3.75	3.22	3.15	3.54
D.	3.94	3.95	4.25	3.21
E.	7.26	7.42	7.32	7.13
F.	4.04	4	4.22	4.46
G.	6	6.2	6.46	6.33
H.	5.31	5.8	5.39	4.83
	N = 72	**N = 55**	**N = 113**	**N = 24**

Section III: STRUCTURE OF INDUCTION PROGRAM

Directions: ***Please rank each of the following statements below from 1-8, with 1 being the most important to 8 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Having a new teacher survey to assess needs of new teachers.
B. Individual follow-up of induction program by experienced educators so that new teachers learn to use new skills effectively in their classrooms.
C. Including well-designed assessment and support components in the induction program.
D. The new teacher induction program addressing long-term career goals.
E. The new teacher induction program addressing the immediate needs of new teachers.
F. The new teacher induction program being divided into progressive stages of achievement.
G. The induction program consisting primarily of formal seminars.
H. The induction program consisting primarily of informal workshops.

Response Average Ranking

	Untenured Teachers ONLY	Recently Tenured Teachers ONLY	Veteran Teachers ONLY	School Administrators ONLY
A.	4.51	4.14	3.97	3.38
B.	4.09	3.59	2.96	3.58
C.	4.29	4.61	3.85	4.08
D.	5.07	5.61	6.46	6
E.	2.25	2.55	2.58	2.92
F.	4.57	4.57	4.55	4.46
G.	6.46	6.31	6.41	5.92
H.	4.75	4.63	5.21	5.67
	N = 68	**N = 51**	**N = 103**	**N = 24**

Section IV: PROFESSIONAL & SUPPORT

Directions: ***Please rank each of the following statements below from 1-10, with 1 being the most important to 10 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Mentors to demonstrate teaching methods and to assist with lesson plans for student mastery.
B. Time for sustained, school-based professional development and lifelong learning opportunities, including workshops and/or conferences.
C. Demonstrating knowledge of content and professional practice while strengthening knowledge and skills.
D. Ongoing formal assessment of professional performance.
E. Ongoing informal assessment of professional performance.
F. Administratively-set expectations and norms of teacher conduct, professional responsibilities, appearance, conduct, and identity.
G. Learning what it means to be a professional and acquiring a professional vocabulary.
H. Contributing to the school and district and participating in school functions.
I. Have a working knowledge and understanding of teachers' legal liabilities and responsibilities.
J. Setting goals for self-improvement and transferring the acquired knowledge, skills, beliefs, and attitudes needed to succeed.

Response Average Ranking

	Untenured Teachers ONLY	Recently Tenured Teachers ONLY	Veteran Teachers ONLY	School Administrators ONLY
A.	3.81	3.4	2.73	4.26
B.	4.14	4.3	5.4	4.42
C.	4.91	4.7	3.99	4.89
D.	6.53	6.98	6.73	6.42
E.	5.57	6.06	5.44	4.84
F.	5.48	6.13	5.36	4.89
G.	7.5	6.85	6.88	6.42
H.	7.22	7.21	7.32	7.16
I.	6.41	5.66	6.06	6.68
J.	5.47	5.26	6.22	5.74
K.	8.95	9.45	9.85	10.26
	N = 58	**N = 47**	**N = 94**	**N = 19**

Section V: OBSERVATIONS & FEEDBACK

Directions: ***Please rank each of the following statements below from 1-10, with 1 being the most important to 10 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Being observed by and receiving coaching with other experienced teachers and mentors.
B. Being observed by the superintendent, principals, and/or other administrators.
C. Receiving formal written evaluations from an administrator that links teaching to student achievement.
D. Specific suggestions and feedback from observations about what can be done better.
E. Mentors to help analyze student work and achievement.
F. Informal visits and conversations and receiving informal administrative feedback.
G. Opportunities for classroom visits and observations of other teachers.
H. Demonstration of a model lesson from an expert teacher.
I. Supervision is distributed throughout the faculty in an organized, consistent, and continuous program.

Response Average Ranking

	Untenured Teachers ONLY	Recently Tenured Teachers ONLY	Veteran Teachers ONLY	School Administrators ONLY
A.	4.24	3.84	3.22	3.05
B.	5.33	6	6.28	6.16
C.	5.29	6.02	6.23	6
D.	4.11	3.41	3.64	3.74
E.	5.35	5.48	5.05	6
F.	5.2	4.84	5.26	4.37
G.	4.71	4.14	4.03	4.58
H.	4.71	4.95	5.11	5.53
I.	6.07	6.32	6.17	5.58
	N = 55	**N = 44**	**N = 87**	**N = 19**

Section VI: PROCEDURAL & MANAGERIAL

Directions: ***Please rank each of the following statements below from 1-11, with 1 being the most important to 11 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Movement of students (start and end of a period or day, fire drills, crisis drills, etc.).
B. Familiarity with locating and obtaining instructional resources and materials.
C. Assigning new teachers to smaller classes, reduced work loads, and reduced number of course preparations.
D. Having a "start-of-school" checklist.
E. Addressing effective classroom management procedures and routines.
F. Addressing school and district procedures for student discipline, defusing potential discipline problems, and dealing with difficult students.
G. Maintaining accurate records and documentation.
H. Effective time management with high student levels of time on task.
I. Identifying and dealing with individual students' needs, interests, abilities, and problems.
J. Avoiding "down-time" strategies and set of quick and easy backups for when things don't go as expected.
K. Providing a plan for substitute teachers.

Response Average Ranking

	Untenured Teachers ONLY	Recently Tenured Teachers ONLY	Veteran Teachers ONLY	School Administrators ONLY
A.	6.73	7.02	6.96	6.39
B.	5.65	5.86	5.79	5.72
C.	6.78	7.36	7.54	8.11
D.	4.71	5.62	5.2	6.22
E.	4.18	3.21	3.04	3.89
F.	4.35	4.6	4.23	4.11
G.	5.35	6.12	5.01	6.17
H.	6.41	5.52	5.8	4.39
I.	5.57	5.95	5.64	5.67
J.	7.12	5.79	7.09	6.61
K.	9.16	8.95	9.69	8.72
	N = 51	**N = 42**	**N = 81**	**N = 18**

Section VII: INSTRUCTIONAL

Directions: ***Please rank each of the following statements below from 1-12, with 1 being the most important to 12 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Using effective instructional practices, strategies, and techniques, and selecting instructional goals.
B. Knowledge of teaching resources, subject/curriculum, pedagogical content, and ways of teaching specific subject matter.
C. Analyzing and understanding a range of teaching and learning styles.
D. Addressing a variety of student evaluation processes using student assessment data to improve instruction.
E. Relating lessons to real life, ensuring that students are aware of the substance and purpose of what they are being asked to do.
F. Encouraging active student participation, using appropriate and varied questioning and discussion techniques and incorporating pupil ideas.
G. Special education issues.
H. Engaging students in critical thinking, probing for knowledge, and providing feedback to students.
I. Setting clear targets and expectations for students' learning and achievement while linking performance to high standards.
J. Maximizing academic learning time and designing and planning coherent instruction with lesson clarity and instructional variety.
K. Integration and use of technology.
L. Planning, organizing and managing instruction and physical space.

Response Average Ranking

	Untenured Teachers ONLY	Recently Tenured Teachers ONLY	Veteran Teachers ONLY	School Administrators ONLY
A.	5.32	3.92	4.22	2.61
B.	5.86	4.76	5.17	5
C.	6.43	5.29	6.99	6.22
D.	6.39	6.61	6.84	6.61
E.	5.61	4.97	6.2	6.39
F.	5.86	6.89	5.22	7.39
G.	7.02	6.95	7.78	7.06
H.	5.68	6.32	6.36	5.94
I.	6.48	7.34	5.76	6.83
J.	6.68	7.11	6.09	6.94
K.	8.59	9.03	8.96	9.33
L.	8.07	8.82	8.41	7.67
	N = 44	**N = 38**	**N = 76**	**N = 18**

APPENDIX J
Survey Results for All Iterations of Participants

TWO STUDY GROUPS ONLY RESULTS

Section I: PSYCHOLOGICAL & CULTURAL

Directions: ***Please rank each of the following statements below from 1-10, with 1 being the most important to 10 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Adjusting to the teaching role and dealing with the shift from student-hood to being a full-time teacher.
B. Maintaining a positive attitude, experiencing and building on successes, and receiving emotional support.
C. High expectations of what pupils can achieve to establish a culture for learning and student motivation.
D. Having confidence with a mentor to help the new teacher feel confident.
E. Remaining calm and professional in the face of unnerving situations while learning to quickly recover from mistakes.
F. Dealing with fatigue.
G. The new teacher becoming acculturated and oriented to school system, building, community, culture, and norms.
H. New teachers learning what is expected of them for success.
I. Focusing on "survival level" of teacher development.
J. Understanding of cultural and ethnic differences.

Response Average Ranking

	Untenured Teachers AND Recently Tenured Teachers	Untenured Teachers AND Veteran Teachers	Untenured Teachers AND School Administrators	Recently Tenured Teachers AND Veteran Teachers	Recently Tenured Teachers AND School Administrators	Veteran Teachers AND School Administrators
A.	5.77	5.6	5.4	5.85	5.87	5.59
B.	3.48	3.57	3.41	3.67	3.57	3.67
C.	3.95	4	3.52	4.38	4.22	4.19
D.	4.8	4.88	5.01	4.82	4.92	4.99
E.	4.07	4.28	4.51	4.08	4.14	4.42
F.	7.87	7.91	8.05	7.85	7.96	7.98
G.	4.59	4.5	4.64	4.46	4.59	4.47
H.	5.17	5.04	5.02	4.94	4.81	4.76
I.	7.35	7.47	7.57	7.25	7.14	7.39
J.	7.91	7.74	7.86	7.65	7.71	7.54
	N = 150	**N = 202**	**N = 107**	**N = 186**	**N = 91**	**N = 143**

Section II: INTERACTIONS & COMMUNICATION

Directions: ***Please rank each of the following statements below from 1-8, with 1 being the most important to 8 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Participating in new teacher study/support/discussion groups dedicated to sharing information about successes and concerns, to effective practice, and to action research.
B. Providing new teachers with co-planning and mentoring time with other teachers and peers.
C. Availability of experienced colleagues who will take new teachers' daily dilemmas seriously.
D. Supporting improvement of teaching practice at teachers' individual points of need.
E. Bus tour of school district.
F. Facing aspects of teaching which were never dealt with or never came up in training.
G. New teacher supervision of volunteers and paraprofessionals.
H. Clarity about the purpose and intended outcomes of the induction program.

Response Average Ranking

	Untenured Teachers AND Recently Tenured Teachers	Untenured Teachers AND Veteran Teachers	Untenured Teachers AND School Administrators	Recently Tenured Teachers AND Veteran Teachers	Recently Tenured Teachers AND School Administrators	Veteran Teachers AND School Administrators
A.	3.28	3.24	3.34	3.13	3.14	3.14
B.	2.29	2.16	2.55	2.15	2.61	2.3
C.	3.52	3.38	3.7	3.17	3.32	3.22
D.	3.94	4.13	3.76	4.15	3.72	4.07
E.	7.33	7.3	7.23	7.35	7.33	7.28
F.	4.02	4.15	4.15	4.15	4.14	4.26
G.	6.09	6.28	6.08	6.38	6.24	6.44
H.	5.52	5.36	5.19	5.52	5.51	5.29
	N = 127	**N = 185**	**N = 96**	**N = 168**	**N = 79**	**N = 137**

Section III: STRUCTURE OF INDUCTION PROGRAM

Directions: ***Please rank each of the following statements below from 1-8, with 1 being the most important to 8 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Having a new teacher survey to assess needs of new teachers.
B. Individual follow-up of induction program by experienced educators so that new teachers learn to use new skills effectively in their classrooms.
C. Including well-designed assessment and support components in the induction program.
D. The new teacher induction program addressing long-term career goals.
E. The new teacher induction program addressing the immediate needs of new teachers.
F. The new teacher induction program being divided into progressive stages of achievement.
G. The induction program consisting primarily of formal seminars.
H. The induction program consisting primarily of informal workshops.

Response Average Ranking

	Untenured Teachers AND Recently Tenured Teachers	Untenured Teachers AND Veteran Teachers	Untenured Teachers AND School Administrators	Recently Tenured Teachers AND Veteran Teachers	Recently Tenured Teachers AND School Administrators	Veteran Teachers AND School Administrators
A.	4.35	4.19	4.22	4.03	3.89	3.86
B.	3.87	3.41	3.96	3.17	3.59	3.08
C.	4.43	4.03	4.24	4.1	4.44	3.9
D.	5.3	5.91	5.32	6.18	5.73	6.37
E.	2.38	2.45	2.42	2.57	2.67	2.65
F.	4.57	4.56	4.54	4.56	4.53	4.54
G.	6.39	6.43	6.32	6.38	6.19	6.31
H.	4.7	5.03	4.99	5.02	4.96	5.3
	N = 119	**N = 171**	**N = 92**	**N = 154**	**N = 75**	**N = 127**

Section IV: PROFESSIONAL & SUPPORT

Directions: ***Please rank each of the following statements below from 1-10, with 1 being the most important to 10 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Mentors to demonstrate teaching methods and to assist with lesson plans for student mastery.
B. Time for sustained, school-based professional development and lifelong learning opportunities, including workshops and/or conferences.
C. Demonstrating knowledge of content and professional practice while strengthening knowledge and skills.
D. Ongoing formal assessment of professional performance.
E. Ongoing informal assessment of professional performance.
F. Administratively-set expectations and norms of teacher conduct, professional responsibilities, appearance, conduct, and identity.
G. Learning what it means to be a professional and acquiring a professional vocabulary.
H. Contributing to the school and district and participating in school functions.
I. Have a working knowledge and understanding of teachers' legal liabilities and responsibilities.
J. Setting goals for self-improvement and transferring the acquired knowledge, skills, beliefs, and attitudes needed to succeed.

Response Average Ranking

	Untenured Teachers AND Recently Tenured Teachers	Untenured Teachers AND Veteran Teachers	Untenured Teachers AND School Administrators	Recently Tenured Teachers AND Veteran Teachers	Recently Tenured Teachers AND School Administrators	Veteran Teachers AND School Administrators
A.	3.63	3.14	3.92	2.96	3.65	2.99
B.	4.21	4.92	4.21	5.04	4.33	5.24
C.	4.82	4.34	4.91	4.23	4.76	4.14
D.	6.73	6.66	6.51	6.82	6.82	6.68
E.	5.79	5.49	5.39	5.65	5.71	5.34
F.	5.77	5.41	5.34	5.62	5.77	5.28
G.	7.21	7.12	7.23	6.87	6.73	6.81
H.	7.22	7.28	7.21	7.28	7.2	7.29
I.	6.08	6.2	6.48	5.93	5.95	6.17
J.	5.37	5.93	5.53	5.9	5.39	6.14
K.	9.17	9.51	9.27	9.72	9.68	9.92
	N = 105	**N = 152**	**N = 77**	**N = 141**	**N = 66**	**N = 113**

Section V: OBSERVATIONS & FEEDBACK

Directions: ***Please rank each of the following statements below from 1-10, with 1 being the most important to 10 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Being observed by and receiving coaching with other experienced teachers and mentors.
B. Being observed by the superintendent, principals, and/or other administrators.
C. Receiving formal written evaluations from an administrator that links teaching to student achievement.
D. Specific suggestions and feedback from observations about what can be done better.
E. Mentors to help analyze student work and achievement.
F. Informal visits and conversations and receiving informal administrative feedback.
G. Opportunities for classroom visits and observations of other teachers.
H. Demonstration of a model lesson from an expert teacher.
I. Supervision is distributed throughout the faculty in an organized, consistent, and continuous program.

Response Average Ranking

	Untenured Teachers AND Recently Tenured Teachers	Untenured Teachers AND Veteran Teachers	Untenured Teachers AND School Administrators	Recently Tenured Teachers AND Veteran Teachers	Recently Tenured Teachers AND School Administrators	Veteran Teachers AND School Administrators
A.	4.06	3.61	3.93	3.43	3.6	3.19
B.	5.63	5.91	5.54	6.18	6.05	6.25
C.	5.62	5.87	5.47	6.16	6.02	6.19
D.	3.8	3.82	4.01	3.56	3.51	3.66
E.	5.4	5.16	5.51	5.19	5.63	5.22
F.	5.04	5.24	4.99	5.12	4.7	5.1
G.	4.45	4.3	4.68	4.07	4.27	4.13
H.	4.82	4.96	4.92	5.06	5.13	5.19
I.	6.18	6.13	5.95	6.22	6.1	6.07
	N = 99	**N = 142**	**N = 74**	**N = 131**	**N = 63**	**N = 106**

Section VI: PROCEDURAL & MANAGERIAL

Directions: ***Please rank each of the following statements below from 1-11, with 1 being the most important to 11 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Movement of students (start and end of a period or day, fire drills, crisis drills, etc.).
B. Familiarity with locating and obtaining instructional resources and materials.
C. Assigning new teachers to smaller classes, reduced work loads, and reduced number of course preparations.
D. Having a "start-of-school" checklist.
E. Addressing effective classroom management procedures and routines.
F. Addressing school and district procedures for student discipline, defusing potential discipline problems, and dealing with difficult students.
G. Maintaining accurate records and documentation.
H. Effective time management with high student levels of time on task.
I. Identifying and dealing with individual students' needs, interests, abilities, and problems.
J. Avoiding "down-time" strategies and set of quick and easy backups for when things don't go as expected.
K. Providing a plan for substitute teachers.

Response Average Ranking

	Untenured Teachers AND Recently Tenured Teachers	Untenured Teachers AND Veteran Teachers	Untenured Teachers AND School Administrators	Recently Tenured Teachers AND Veteran Teachers	Recently Tenured Teachers AND School Administrators	Veteran Teachers AND School Administrators
A.	6.86	6.87	6.64	6.98	6.83	6.86
B.	5.74	5.73	5.67	5.81	5.82	5.78
C.	7.04	7.25	7.13	7.48	7.58	7.65
D.	5.12	5.01	5.1	5.34	5.8	5.38
E.	3.74	3.48	4.1	3.1	3.42	3.19
F.	4.46	4.28	4.29	4.36	4.45	4.21
G.	5.7	5.14	5.57	5.39	6.13	5.22
H.	6.01	6.04	5.88	5.71	5.18	5.55
I.	5.74	5.61	5.59	5.75	5.87	5.65
J.	6.52	7.1	6.99	6.64	6.03	7
K.	9.06	9.48	9.04	9.44	8.88	9.52
	N = 93	**N = 132**	**N = 69**	**N = 123**	**N = 60**	**N = 99**

Section VII: INSTRUCTIONAL

Directions: ***Please rank each of the following statements below from 1-12, with 1 being the most important to 12 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Using effective instructional practices, strategies, and techniques, and selecting instructional goals.
B. Knowledge of teaching resources, subject/curriculum, pedagogical content, and ways of teaching specific subject matter.
C. Analyzing and understanding a range of teaching and learning styles.
D. Addressing a variety of student evaluation processes using student assessment data to improve instruction.
E. Relating lessons to real life, ensuring that students are aware of the substance and purpose of what they are being asked to do.
F. Encouraging active student participation, using appropriate and varied questioning and discussion techniques and incorporating pupil ideas.
G. Special education issues.
H. Engaging students in critical thinking, probing for knowledge, and providing feedback to students.
I. Setting clear targets and expectations for students' learning and achievement while linking performance to high standards.
J. Maximizing academic learning time and designing and planning coherent instruction with lesson clarity and instructional variety.
K. Integration and use of technology.
L. Planning, organizing and managing instruction and physical space.

Response Average Ranking

	Untenured Teachers AND Recently Tenured Teachers	Untenured Teachers AND Veteran Teachers	Untenured Teachers AND School Administrators	Recently Tenured Teachers AND Veteran Teachers	Recently Tenured Teachers AND School Administrators	Veteran Teachers AND School Administrators
A.	4.67	4.63	4.53	4.12	3.5	3.91
B.	5.35	5.43	5.61	5.04	4.84	5.14
C.	5.9	6.78	6.37	6.42	5.59	6.84
D.	6.49	6.68	6.45	6.76	6.61	6.8
E.	5.32	5.98	5.84	5.79	5.43	6.23
F.	6.34	5.46	6.31	5.78	7.05	5.64
G.	6.99	7.5	7.03	7.5	6.98	7.64
H.	5.98	6.11	5.76	6.34	6.2	6.28
I.	6.88	6.03	6.58	6.29	7.18	5.97
J.	6.88	6.31	6.76	6.43	7.05	6.26
K.	8.79	8.83	8.81	8.98	9.13	9.03
L.	8.41	8.28	7.95	8.54	8.45	8.27
	N = 82	**N = 120**	**N = 62**	**N = 114**	**N = 56**	**N = 94**

APPENDIX K
Survey Results for All Iterations of Participants

THREE STUDY GROUPS ONLY RESULTS

Section I: PSYCHOLOGICAL & CULTURAL

Directions: ***Please rank each of the following statements below from 1-10, with 1 being the most important to 10 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Adjusting to the teaching role and dealing with the shift from student-hood to being a full-time teacher.
B. Maintaining a positive attitude, experiencing and building on successes, and receiving emotional support.
C. High expectations of what pupils can achieve to establish a culture for learning and student motivation.
D. Having confidence with a mentor to help the new teacher feel confident.
E. Remaining calm and professional in the face of unnerving situations while learning to quickly recover from mistakes.
F. Dealing with fatigue.
G. The new teacher becoming acculturated and oriented to school system, building, community, culture, and norms.
H. New teachers learning what is expected of them for success.
I. Focusing on "survival level" of teacher development.
J. Understanding of cultural and ethnic differences.

Response Average Ranking

	Untenured Teachers AND Recently Tenured Teachers AND Veteran Teachers	Untenured teachers AND Recently Tenured teachers AND School Administrators	Untenured Teachers AND Veteran Teachers AND School Administrators	Recently tenured teachers AND Veteran Teachers AND School Administrators
A.	5.74	5.68	5.55	5.77
B.	3.58	3.48	3.57	3.65
C.	4.12	3.89	3.95	4.28
D.	4.84	4.9	4.94	4.9
E.	4.15	4.23	4.38	4.21
F.	7.88	7.95	7.96	7.92
G.	4.51	4.61	4.53	4.49
H.	5.04	5.03	4.95	4.85
I.	7.36	7.36	7.47	7.28
J.	7.76	7.84	7.7	7.63
	N = 269	**N = 174**	**N = 226**	**N = 210**

Section II: INTERACTIONS & COMMUNICATION

Directions: ***Please rank each of the following statements below from 1-8, with 1 being the most important to 8 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Participating in new teacher study/support/discussion groups dedicated to sharing information about successes and concerns, to effective practice, and to action research.
B. Providing new teachers with co-planning and mentoring time with other teachers and peers.
C. Availability of experienced colleagues who will take new teachers' daily dilemmas seriously.
D. Supporting improvement of teaching practice at teachers' individual points of need.
E. Bus tour of school district.
F. Facing aspects of teaching which were never dealt with or never came up in training.
G. New teacher supervision of volunteers and paraprofessionals.
H. Clarity about the purpose and intended outcomes of the induction program.

Response Average Ranking

	Untenured Teachers AND Recently Tenured Teachers AND Veteran Teachers	Untenured teachers AND Recently Tenured teachers AND School Administrators	Untenured Teachers AND Veteran Teachers AND School Administrators	Recently tenured teachers AND Veteran Teachers AND School Administrators
A.	3.21	3.26	3.23	3.14
B.	2.19	2.46	2.3	2.3
C.	3.35	3.52	3.4	3.22
D.	4.09	3.83	4.02	4.03
E.	7.33	7.3	7.28	7.32
F.	4.12	4.09	4.19	4.19
G.	6.26	6.13	6.29	6.37
H.	5.46	5.41	5.3	5.44
	N = 240	**N = 151**	**N = 209**	**N = 192**

Section III: STRUCTURE OF INDUCTION PROGRAM

Directions: ***Please rank each of the following statements below from 1-8, with 1 being the most important to 8 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Having a new teacher survey to assess needs of new teachers.
B. Individual follow-up of induction program by experienced educators so that new teachers learn to use new skills effectively in their classrooms.
C. Including well-designed assessment and support components in the induction program.
D. The new teacher induction program addressing long-term career goals.
E. The new teacher induction program addressing the immediate needs of new teachers.
F. The new teacher induction program being divided into progressive stages of achievement.
G. The induction program consisting primarily of formal seminars.
H. The induction program consisting primarily of informal workshops.

Response Average Ranking

	Untenured Teachers AND Recently Tenured Teachers AND Veteran Teachers	Untenured teachers AND Recently Tenured teachers AND School Administrators	Untenured Teachers AND Veteran Teachers AND School Administrators	Recently tenured teachers AND Veteran Teachers AND School Administrators
A.	4.18	4.19	4.09	3.94
B.	3.45	3.83	3.43	3.22
C.	4.16	4.37	4.04	4.1
D.	5.84	5.42	5.92	6.15
E.	2.47	2.47	2.51	2.62
F.	4.56	4.55	4.55	4.54
G.	6.4	6.31	6.36	6.31
H.	4.94	4.86	5.11	5.11
	N = 222	**N = 143**	**N = 195**	**N = 178**

Section IV: PROFESSIONAL & SUPPORT

Directions: ***Please rank each of the following statements below from 1-10, with 1 being the most important to 10 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Mentors to demonstrate teaching methods and to assist with lesson plans for student mastery.
B. Time for sustained, school-based professional development and lifelong learning opportunities, including workshops and/or conferences.
C. Demonstrating knowledge of content and professional practice while strengthening knowledge and skills.
D. Ongoing formal assessment of professional performance.
E. Ongoing informal assessment of professional performance.
F. Administratively-set expectations and norms of teacher conduct, professional responsibilities, appearance, conduct, and identity.
G. Learning what it means to be a professional and acquiring a professional vocabulary.
H. Contributing to the school and district and participating in school functions.
I. Have a working knowledge and understanding of teachers' legal liabilities and responsibilities.
J. Setting goals for self-improvement and transferring the acquired knowledge, skills, beliefs, and attitudes needed to succeed.

Response Average Ranking

	Untenured Teachers AND Recently Tenured Teachers AND Veteran Teachers	Untenured teachers AND Recently Tenured teachers AND School Administrators	Untenured Teachers AND Veteran Teachers AND School Administrators	Recently tenured teachers AND Veteran Teachers AND School Administrators
A.	3.21	3.73	3.27	3.11
B.	4.77	4.24	4.87	4.96
C.	4.43	4.83	4.4	4.31
D.	6.73	6.69	6.63	6.77
E.	5.62	5.65	5.42	5.55
F.	5.58	5.64	5.35	5.53
G.	7.06	7.09	7.04	6.82
H.	7.27	7.21	7.27	7.27
I.	6.07	6.17	6.25	6.02
J.	5.77	5.43	5.91	5.88
K.	9.49	9.34	9.59	9.78
	N = 199	**N = 124**	**N = 171**	**N = 160**

Section V: OBSERVATIONS & FEEDBACK

Directions: ***Please rank each of the following statements below from 1-10, with 1 being the most important to 10 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Being observed by and receiving coaching with other experienced teachers and mentors.
B. Being observed by the superintendent, principals, and/or other administrators.
C. Receiving formal written evaluations from an administrator that links teaching to student achievement.
D. Specific suggestions and feedback from observations about what can be done better.
E. Mentors to help analyze student work and achievement.
F. Informal visits and conversations and receiving informal administrative feedback.
G. Opportunities for classroom visits and observations of other teachers.
H. Demonstration of a model lesson from an expert teacher.
I. Supervision is distributed throughout the faculty in an organized, consistent, and continuous program.

Response Average Ranking

	Untenured Teachers AND Recently Tenured Teachers AND Veteran Teachers	Untenured teachers AND Recently Tenured teachers AND School Administrators	Untenured Teachers AND Veteran Teachers AND School Administrators	Recently tenured teachers AND Veteran Teachers AND School Administrators
A.	3.67	3.9	3.55	3.38
B.	5.93	5.71	5.94	6.18
C.	5.9	5.68	5.88	6.14
D.	3.73	3.79	3.81	3.59
E.	5.24	5.5	5.26	5.29
F.	5.15	4.93	5.14	5.03
G.	4.26	4.47	4.33	4.13
H.	4.96	4.93	5.02	5.12
I.	6.18	6.08	6.07	6.14
	N = 186	**N = 118**	**N = 161**	**N = 150**

Section VI: PROCEDURAL & MANAGERIAL

Directions: ***Please rank each of the following statements below from 1-11, with 1 being the most important to 11 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Movement of students (start and end of a period or day, fire drills, crisis drills, etc.).
B. Familiarity with locating and obtaining instructional resources and materials.
C. Assigning new teachers to smaller classes, reduced work loads, and reduced number of course preparations.
D. Having a "start-of-school" checklist.
E. Addressing effective classroom management procedures and routines.
F. Addressing school and district procedures for student discipline, defusing potential discipline problems, and dealing with difficult students.
G. Maintaining accurate records and documentation.
H. Effective time management with high student levels of time on task.
I. Identifying and dealing with individual students' needs, interests, abilities, and problems.
J. Avoiding "down-time" strategies and set of quick and easy backups for when things don't go as expected.
K. Providing a plan for substitute teachers.

Response Average Ranking

	Untenured Teachers AND Recently Tenured Teachers AND Veteran Teachers	Untenured teachers AND Recently Tenured teachers AND School Administrators	Untenured Teachers AND Veteran Teachers AND School Administrators	Recently tenured teachers AND Veteran Teachers AND School Administrators
A.	6.91	6.78	6.81	6.91
B.	5.76	5.74	5.73	5.8
C.	7.28	7.22	7.35	7.56
D.	5.16	5.3	5.15	5.45
E.	3.41	3.77	3.53	3.2
F.	4.36	4.41	4.26	4.33
G.	5.38	5.77	5.27	5.49
H.	5.91	5.75	5.84	5.54
I.	5.7	5.73	5.62	5.74
J.	6.78	6.53	7.04	6.64
K.	9.36	9.01	9.39	9.35
	N = 174	**N = 111**	**N = 150**	**N = 141**

Section VII: INSTRUCTIONAL

Directions: ***Please rank each of the following statements below from 1-12, with 1 being the most important to 12 being the least important regarding areas that should be focused upon the most in new teacher induction:***

A. Using effective instructional practices, strategies, and techniques, and selecting instructional goals.
B. Knowledge of teaching resources, subject/curriculum, pedagogical content, and ways of teaching specific subject matter.
C. Analyzing and understanding a range of teaching and learning styles.
D. Addressing a variety of student evaluation processes using student assessment data to improve instruction.
E. Relating lessons to real life, ensuring that students are aware of the substance and purpose of what they are being asked to do.
F. Encouraging active student participation, using appropriate and varied questioning and discussion techniques and incorporating pupil ideas.
G. Special education issues.
H. Engaging students in critical thinking, probing for knowledge, and providing feedback to students.
I. Setting clear targets and expectations for students' learning and achievement while linking performance to high standards.
J. Maximizing academic learning time and designing and planning coherent instruction with lesson clarity and instructional variety.
K. Integration and use of technology.
L. Planning, organizing and managing instruction and physical space.

Response Average Ranking

	Untenured Teachers AND Recently Tenured Teachers AND Veteran Teachers	Untenured teachers AND Recently Tenured teachers AND School Administrators	Untenured Teachers AND Veteran Teachers AND School Administrators	Recently tenured teachers AND Veteran Teachers AND School Administrators
A.	4.46	4.3	4.36	3.92
B.	5.27	5.29	5.37	5.03
C.	6.42	5.96	6.71	6.39
D.	6.66	6.51	6.67	6.74
E.	5.74	5.51	6.04	5.87
F.	5.8	6.53	5.71	6
G.	7.37	7	7.44	7.44
H.	6.16	5.97	6.09	6.29
I.	6.34	6.87	6.13	6.36
J.	6.5	6.89	6.39	6.5
K.	8.87	8.89	8.89	9.03
L.	8.41	8.28	8.2	8.42
	N = 158	**N = 100**	**N = 138**	**N = 132**

APPENDIX L
Two-sample One-Tailed T-Test Calculations

The nomenclature used for these calculations is T-TEST L.#.*, where L represents that the calculation is listed in Appendix L, # represents the section of the survey for which the t-test is calculated (1-7), and * is the number of the t-test chronologically for each section of the survey. So, for example, T-TEST L.3.4 is the name of the fourth t-test in the third section of the survey in Appendix L.

T-TEST L.1.1
T-TEST Comparing SCHOOL ADMINISTRATORS with ALL TEACHERS for "Focusing on 'survival level of teacher development"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 24$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 179/24 = 7.45833$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 175.9583$

$S_{adm}^2 = S_{adm}/(N - 1) = 175.9583/23 = 7.65036$

$N_{teach} = 269$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 1973/269 = 7.3346$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 1514.0926$

$S_{teach}^2 = S_{teach}/(N - 1) = 1514.0926/268 = 5.6496$

$N_{adm} = 24$ $N_{teach} = 269$

$S_{(\mu_{teach} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[(7.65036/24) + (5.6496/269)]} = \sqrt{(0.318765 + 0.02100)} = \sqrt{0.339767} = 0.582896$

t-statistic $= (\mu_{teach} - \mu_{adm})/s_{(\mu_{teach} - \mu_{adm})} = |(7.3346 - 7.45833)/0.582896| = 0.212268$

$df = N_{adm} + N_{teach} - 2 = 24 + 269 - 2 = 291$

The critical t-value for (df = 100, α = .05, one-tailed) = 1.660, and the critical t-value for (df = 1000, α = .05, one-tailed) = 1.646. Therefore, the critical t-value for (df = 291, α = .05, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (0.212268) is **less than** the critical t-value (some value that lies in the region 1.646 < x <

1.646), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of all teacher respondents combined for this survey item, "Focusing on the 'survival level' of teacher development" are **not** statistically significantly different from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.1.2

T-TEST Comparing SCHOOL ADMINISTRATORS with ALL TEACHERS for "New teachers learning what is expected of them for success"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 24$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 100/24 = 4.1667$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 137.3333$

$S_{adm}^2 = S_{adm}/(N - 1) = 137.3333/23 = 5.97101$

$N_{teach} = 269$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 1351/269 = 5.02230$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 1690.643$

$S_{teach}^2 = S_{teach}/(N - 1) = 1690.643/268 = 6.30837$

$N_{adm} = 24$ $N_{teach} = 269$

$S_{(\mu_{teach} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[(5.97101/24) + (6.30837/269)]} = \sqrt{(0.248792 + 0.023451)} = \sqrt{0.272243} = 0.52177$

t-statistic = $(\mu_{teach} - \mu_{adm})/s_{(\mu_{teach} - \mu_{adm})} = (5.02230 - 4.1667)/0.52177 = 1.63980$

df = $N_{adm} + N_{teach} - 2 = 24 + 269 - 2 = 291$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 291, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (1.63980) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of all teacher respondents combined for this survey item, "New teachers learning what is expected of them for success" are **not** statistically significantly different from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.1.3

T-TEST Comparing SCHOOL ADMINISTRATORS with ALL TEACHERS for "Having confidence with a mentor to help the new teacher feel confident"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 24$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 132/24 = 5.5$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 138.0$

$S_{adm}^2 = S_{adm}/(N - 1) = 138/23 = 6$

$N_{teach} = 269$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 1296/269 = 4.81784$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 1636.8628$

$S_{teach}^2 = S_{teach}/(N - 1) = 1636.8628/268 = 6.107697$

$N_{adm} = 24$ $N_{teach} = 269$

$S_{(\mu teach - \mu adm)} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[(6/24) + (6.107697/269)]} =$
$\sqrt{(0.25 + 0.022705)} = \sqrt{0.272705} = 0.522212$

t-statistic = $(\mu_{teach} - \mu_{adm})/s_{(\mu teach - \mu adm)} = |(4.81784 - 5.5)/0.522212| = 1.30629$

df = $N_{adm} + N_{teach} - 2 = 24 + 269 - 2 = 291$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 291, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (1.30629) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of all teacher respondents combined for this survey item, "Having confidence with a mentor to help the new teacher feel confident"

are **not** statistically significantly different from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.1.4

T-TEST Comparing SCHOOL ADMINISTRATORS with ALL TEACHERS for "Adjusting to the teaching role and dealing with the shift from student-hood to being a full-time teacher"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 24$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 123/24 = 5.125$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 218.625$

$S_{adm}^2 = S_{adm}/(N - 1) = 218.625/23 = 9.50543$

$N_{teach} = 269$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 1543/269 = 5.73606$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 2550.260$

$S_{teach}^2 = S_{teach}/(N - 1) = 2550.260/268 = 9.515896$

$N_{adm} = 24$ $N_{teach} = 269$

$S_{(\mu_{teach} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[(9.50543/24) + (9.515896/269)]} = \sqrt{(0.39606 + 0.035375)} = \sqrt{0.431435} = 0.656837$

t-statistic $= (\mu_{teach} - \mu_{adm})/s_{(\mu_{teach} - \mu_{adm})} = |(5.73606 - 5.125)/0.656837| = 0.930307$

$df = N_{adm} + N_{teach} - 2 = 24 + 269 - 2 = 291$

The critical t-value for (df = 100, α = .05, one-tailed) = 1.660, and the critical t-value for (df = 1000, α = .05, one-tailed) = 1.646. Therefore, the critical t-value for (df = 291, α = .05, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (0.930307) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of all teacher respondents combined for this survey item, "Adjusting to the teaching role and dealing with the shift from student-hood

to being a full-time teacher" are **not** statistically significantly different from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.1.5

T-TEST Comparing SCHOOL ADMINISTRATORS with ALL TEACHERS for "Remaining calm and professional in the face of unnerving situations while learning to quickly recover from mistakes"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 24$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 125/24 = 5.20833$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 75.9583$

$S_{adm}^2 = S_{adm}/(N - 1) = 75.9583/23 = 3.302535$

$N_{teach} = 269$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 1113/269 = 4.13755$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 1288.7915$

$S_{teach}^2 = S_{teach}/(N - 1) = 1288.7915/268 = 4.808924$

$N_{adm} = 24$ $N_{teach} = 269$

$S_{(\mu_{teach} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[(3.302535/24) + (4.808924/269)]} = \sqrt{(0.137606 + 0.017877)} = \sqrt{0.155483} = 0.394313$

t-statistic $= (\mu_{teach} - \mu_{adm})/s_{(\mu_{teach} - \mu_{adm})} = |(5.73606 - 5.125)/0.394313| = 1.54968$

$df = N_{adm} + N_{teach} - 2 = 24 + 269 - 2 = 291$

The critical t-value for (df = 100, α = .05, one-tailed) = 1.660, and the critical t-value for (df = 1000, α = .05, one-tailed) = 1.646. Therefore, the critical t-value for (df = 291, α = .05, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (1.54968) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of all teacher respondents combined for this survey item, "Remaining calm and professional in the face of unnerving situations while

learning to quickly recover from mistakes" are **not** statistically significantly different from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.1.6

T-TEST Comparing SCHOOL ADMINISTRATORS with ALL TEACHERS for "Understanding of cultural and ethnic differences"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 24$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 178/24 = 7.41667$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 117.8333$

$S_{adm}^2 = S_{adm}/(N - 1) = 117.8333/23 = 5.123187$

$N_{teach} = 269$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 2079/269 = 7.72862$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 1185.4579$

$S_{teach}^2 = S_{teach}/(N - 1) = 1185.4579/268 = 4.42335$

$N_{adm} = 24$ $N_{teach} = 269$

$S_{(\mu_{teach} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[(5.123187/24) + (4.42335/269)]} =$

$\sqrt{(0.213466 + 0.016444)} = \sqrt{0.22991} = 0.479489$

t-statistic $= (\mu_{teach} - \mu_{adm})/s_{(\mu_{teach} - \mu_{adm})} = |(7.72862 - 7.41667)/0.479489| = 0.650588$

$df = N_{adm} + N_{teach} - 2 = 24 + 269 - 2 = 291$

The critical t-value for (df = 100, α = .05, one-tailed) = 1.660, and the critical t-value for (df = 1000, α = .05, one-tailed) = 1.646. Therefore, the critical t-value for (df = 291, α = .05, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (0.650588) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of all teacher respondents combined for this survey item, "Understanding of cultural and ethnic differences" are **not** statistically significantly different from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.1.7

T-TEST Comparing SCHOOL ADMINISTRATORS with UNTENURED TEACHERS and RECENTLY TENURED TEACHERS for "Understanding of cultural and ethnic differences"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 24$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 178/24 = 7.41667$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 117.8333$

$S_{adm}^2 = S_{adm}/(N - 1) = 117.8333/23 = 5.123187$

$N_{teach} = 150$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 1179/150 = 7.86$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 650.2804$

$S_{teach}^2 = S_{teach}/(N - 1) = 650.2804/149 = 4.364298$

$N_{adm} = 24$ $N_{teach} = 150$

$S_{(\mu_{teach} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[(5.123187/24) + (4.364298/150)]} = \sqrt{(0.213447 + 0.029095)} = \sqrt{0.242542} = 0.492486$

t-statistic = $(\mu_{teach} - \mu_{adm})/s_{(\mu_{teach} - \mu_{adm})} = |(7.41667 - 7.86)/0.492486| = 0.900188$

df = $N_{adm} + N_{teach} - 2 = 24 + 269 - 2 = 291$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 291, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (0.900188) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of all untenured teachers and recently tenured teachers combined for this survey item, "Understanding of cultural and ethnic differences" are **not** statistically significantly different from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.1.8

T-TEST Comparing SCHOOL ADMINISTRATORS with RECENTLY TENURED and VETERAN TEACHERS for "Remaining calm and professional in the face of unnerving situations while learning to quickly recover from mistakes"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 24$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 125/24 = 5.20833$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 75.9583$

$S_{adm}^2 = S_{adm}/(N - 1) = 75.9583/23 = 3.302535$

$N_{teach} = 186$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 755/186 = 4.05914$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 909.8728$

$S_{teach}^2 = S_{teach}/(N - 1) = 909.8728/185 = 4.918231$

$N_{adm} = 24$ $N_{teach} = 186$

$S_{(\mu_{teach} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[3.302535/24) + (4.918231/186)]} =$
$\sqrt{(0.137606 + 0.026442)} = \sqrt{0.164048} = 0.405029$

t-statistic $= (\mu_{teach} - \mu_{adm})/s_{(\mu_{teach} - \mu_{adm})} = |(5.20833 - 4.05914)/0.405029| = 2.837303$

df $= N_{adm} + N_{teach} - 2 = 24 + 186 - 2 = 208$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 208, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (2.837303) is **greater than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This **falls** in the critical region. Therefore**, H_0 is rejected**.

The conclusion is that the rankings of recently tenured teachers combined with veteran teachers for this survey item, "Remaining calm and professional in the face of unnerving situations while learning to quickly recover from mistakes" **are statistically significantly different** from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.2.1

T-TEST Comparing SCHOOL ADMINISTRATORS with ALL TEACHERS for "Providing new teachers with co-planning and mentoring time with other teachers and peers"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 24$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 80/24 = 3.33333$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 51.33333$

$S_{adm}^2 = S_{adm}/(N - 1) = 51.33333/23 = 2.231884$

$N_{teach} = 240$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 526/240 = 2.191667$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 523.18333$

$S_{teach}^2 = S_{teach}/(N - 1) = 523.18333/239 = 2.189052$

$N_{adm} = 24$ $N_{teach} = 240$

$S_{(\mu teach - \mu adm)} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[(2.231884/24) + (2.189052/240)]} = \sqrt{(0.092995 + 0.009121)} = \sqrt{0.102116} = 0.319556$

t-statistic = $(\mu_{teach} - \mu_{adm})/s_{(\mu teach - \mu adm)} = |(3.33333 - 2.191667)/0.319556| = 3.57265$

df = $N_{adm} + N_{teach} - 2 = 24 + 240 - 2 = 262$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 262, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (3.57265) is **greater than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This **falls** in the critical region. Therefore, **H_0 is rejected**.

The conclusion is that the rankings of all teacher participants for this survey item, "Providing new teachers with co-planning and mentoring time with other teachers and peers" **are statistically significantly different** from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.2.2

T-TEST Comparing SCHOOL ADMINISTRATORS with ALL TEACHERS for "Supporting improvement of teaching practice at teacher's individual points of need"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 24$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 77/24 = 3.20833$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 93.9583$

$S_{adm}^2 = S_{adm}/(N - 1) = 93.9583/23 = 4.085143$

$N_{teach} = 240$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 981/240 = 4.0875$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 467.1625$

$S_{teach}^2 = S_{teach}/(N - 1) = 467.1625/239 = 1.954655$

$N_{adm} = 24$ $N_{teach} = 240$

$S_{(\mu_{teach} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[(4.085143/24) + (1.954655/240)]} = \sqrt{(0.170214 + 0.008144)} = \sqrt{0.178358} = 0.4223248$

t-statistic = $(\mu_{teach} - \mu_{adm})/s_{(\mu_{teach} - \mu_{adm})} = |(3.20833 - 4.0875)/0.4223248| = 2.081739$

$df = N_{adm} + N_{teach} - 2 = 24 + 240 - 2 = 262$

The critical t-value for (df = 100, α = .05, one-tailed) = 1.660, and the critical t-value for (df = 1000, α = .05, one-tailed) = 1.646. Therefore, the critical t-value for (df = 262, α = .05, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (2.081739) is **greater than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This **falls** in the critical region. Therefore, **H_0 is rejected**.

The conclusion is that the rankings of the all teacher participants for this survey item, "Supporting improvement of teaching practice at teachers' individual points of need" **are statistically significantly different** from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.2.3

T-TEST Comparing SCHOOL ADMINISTRATORS with VETERAN TEACHERS for "Supporting improvement of teaching practice at teacher's individual points of need"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 24$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 77/24 = 3.20833$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 93.9583$

$S_{adm}^2 = S_{adm}/(N - 1) = 93.9583/23 = 4.085143$

$N_{teach} = 113$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 480/113 = 4.247788$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 185.0619$

$S_{teach}^2 = S_{teach}/(N - 1) = 185.0619/112 = 1.652338$

$N_{adm} = 24$ $N_{teach} = 113$

$S_{(\mu_{teach} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[(4.085143/24) + (1.652338/113)]} = \sqrt{(0.170214 + 0.0146224)} = \sqrt{0.184836} = 0.429926$

t-statistic = $(\mu_{teach} - \mu_{adm})/s_{(\mu_{teach} - \mu_{adm})} = |(3.20833 - 4.247788)/0.429926| = 2.41776$

df = $N_{adm} + N_{teach} - 2 = 24 + 113 - 2 = 135$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 135, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (2.41776) is **greater than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This **falls** in the critical region. Therefore, **H_0 is rejected**.

The conclusion is that the rankings of the school administrators for this survey item, "Supporting improvement of teaching practice at teachers' individual points of need" **are statistically significantly different** from the rankings of the veteran teachers with a confidence interval of 95%.

T-TEST L.3.1

T-TEST Comparing SCHOOL ADMINISTRATORS with UNTENURED TEACHERS and VETERAN TEACHERS for "Having a new teacher survey to assess needs of new teachers"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 24$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 81/24 = 3.375$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 125.625$

$S_{adm}^2 = S_{adm}/(N - 1) = 125.625/23 = 5.461957$

$N_{teach} = 171$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 716/171 = 4.187135$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 998.0117$

$S_{teach}^2 = S_{teach}/(N - 1) = 998.0117/170 = 5.870657$

$N_{adm} = 24$ $N_{teach} = 171$

$S_{(\mu teach - \mu adm)} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[(5.461957/24) + (5.870657/171)]} =$

$\sqrt{(0.227582 + 0.034331)} = \sqrt{0.2619133} = 0.511775$

t-statistic = $(\mu_{teach} - \mu_{adm})/s_{(\mu teach - \mu adm)} = |(4.18714 - 3.375)/0.511775| = 1.586908$

df = $N_{adm} + N_{teach} - 2 = 24 + 171 - 2 = 193$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 193, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (1.586908) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the school administrators for this survey item, "Having a new teacher survey to assess needs of new teachers" are **not** statistically significantly different from the rankings of the untenured teachers and veteran teachers combined with a confidence interval of 95%.

T-TEST L.3.2

T-TEST Comparing RECENTLY TENURED TEACHERS (RTT) with UNTENURED TEACHERS and VETERAN TEACHERS (UTVT) for "Including well-designed assessment and support components in the induction program"

H_0: $\mu_{rtt} = \mu_{utvt}$ $\alpha = .05$

H_1: $\mu_{rtt} \neq \mu_{utvt}$

$N_{rtt} = 51$

$\mu_{rtt} = \sum X_{rtt} / N_{rtt} = 235/51 = 4.60784$

$S_{rtt} = \sum(X_{rtt} - \mu_{rtt})^2 = 174.1569$

$S_{rtt}^2 = S_{rtt}/(N - 1) = 174.1569/50 = 3.483138$

$N_{utvt} = 171$

$\mu_{utvt} = \sum X_{utvt} / N_{utvt} = 689/171 = 4.02924$

$S_{utvt} = \sum(X_{utvt} - \mu_{utvt})^2 = 626.8538$

$S_{utvt}^2 = S_{utvt}/(N - 1) = 626.8538/170 = 3.687375$

$N_{rtt} = 51$ $N_{utvt} = 171$

$S_{(\mu_{utvt} - \mu_{rtt})} = \sqrt{[(S_{rtt}^2 / N_{rtt}) + (S_{utvt}^2)/N_{utvt})]} = \sqrt{[(3.483138/51) + (3.687375/171)]} =$
$\sqrt{(0.068297 + 0.021564)} = \sqrt{0.0898605} = 0.2997674$

t-statistic $= (\mu_{utvt} - \mu_{rtt})/s_{(\mu_{utvt} - \mu_{rtt})} = |(4.02924 - 4.60784)/0.2997674| = 1.930163$

df $= N_{rtt} + N_{utvt} - 2 = 51 + 171 - 2 = 220$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 220, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (1.930163) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the recently tenured teachers for this survey item, "Including well-designed assessment and support components in the induction program" are **not** statistically significantly different from the rankings of the untenured teachers and veteran teachers combined with a confidence interval of 95%.

T-TEST L.4.1

T-TEST Comparing VETERAN TEACHERS (VET) with UNTENURED TEACHERS, RECENTLY TENURED TEACHERS, and SCHOOL ADMINISTRATORS (other) for "Time for sustained, school-based professional development and lifelong learning opportunities, including workshops and/or conferences"

H_0: $\mu_{vet} = \mu_{other}$ $\alpha = .05$

H_1: $\mu_{vet} \neq \mu_{other}$

$N_{vet} = 94$

$\mu_{vet} = \sum X_{vet} / N_{vet} = 508/94 = 5.40426$

$S_{vet} = \sum(X_{vet} - \mu_{vet})^2 = 770.6383$

$S_{vet}^2 = S_{vet}/(N - 1) = 770.6383/93 = 8.286433$

$N_{other} = 124$

$\mu_{other} = \sum X_{other} / N_{other} = 526/124 = 4.241935$

$S_{other} = \sum(X_{other} - \mu_{other})^2 = 976.7419$

$S_{other}^2 = S_{other}/(N - 1) = 976.7419/123 = 7.940991$

$N_{vet} = 94$ $N_{other} = 124$

$S_{(\mu_{other} - \mu_{vet})} = \sqrt{[(S_{vet}^2 / N_{vet}) + (S_{other}^2)/N_{other})]} = \sqrt{[(8.286533/94) + (7.940991/124)]} =$
$\sqrt{(0.088155 + 0.064040)} = \sqrt{0.152195} = 0.390122$

t-statistic = $(\mu_{other} - \mu_{vet})/s_{(\mu_{other} - \mu_{vet})} = |(4.241935 - 5.40426)/0.390122| = 2.97388$

df = $N_{vet} + N_{other} - 2 = 94 + 124 - 2 = 216$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 216, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (2.97388) is **greater than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This **falls** in the critical region. Therefore, **H_0 is rejected**.

The conclusion is that the rankings of the veteran teachers for this survey item, "Time for sustained, school-based professional development and lifelong learning opportunities, including workshops and/or conferences" **are statistically significantly different** from the rankings of the untenured teachers, recently tenured teachers, and school administrators combined with a confidence interval of 95%.

T-TEST L.4.2

T-TEST Comparing SCHOOL ADMINISTRATORS with VETERAN TEACHERS for "Demonstrating knowledge of content and professional practice while strengthening knowledge and skills"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 19$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 93/19 = 4.89474$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 113.7895$

$S_{adm}^2 = S_{adm}/(N - 1) = 113.7895/18 = 6.321639$

$N_{teach} = 94$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 375/94 = 3.98936$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 654.9894$

$S_{teach}^2 = S_{teach}/(N - 1) = 654.9894/93 = 7.042897$

$N_{adm} = 19$ $N_{teach} = 94$

$S_{(\mu_{teach} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[(6.321639/19) + (7.042897/94)]} =$

$\sqrt{(0.332718 + 0.074924)} = \sqrt{0.407642} = 0.638469$

t-statistic $= (\mu_{teach} - \mu_{adm})/s_{(\mu_{teach} - \mu_{adm})} = |(3.98936 - 4.89474)/0.638469| = 1.41805$

$df = N_{adm} + N_{teach} - 2 = 19 + 94 - 2 = 111$

The critical t-value for (df = 100, α = .05, one-tailed) = 1.660, and the critical t-value for (df = 1000, α = .05, one-tailed) = 1.646. Therefore, the critical t-value for (df = 111, α = .05, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (1.41805) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the school administrators for this survey item, "Demonstrating knowledge of content and professional practice while strengthening knowledge and skills" are **not** statistically significantly different from the rankings of the veteran teachers with a confidence interval of 95%.

T-TEST L.4.3

T-TEST Comparing SCHOOL ADMINISTRATORS with RECENTLY TENURED TEACHERS for "Ongoing formal assessment of professional performance"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 19$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 122/19 = 6.42105$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 176.6316$

$S_{adm}^2 = S_{adm}/(N - 1) = 176.6316/18 = 9.812867$

$N_{teach} = 47$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 328/47 = 6.97872$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 340.9787$

$S_{teach}^2 = S_{teach}/(N - 1) = 340.9787/46 = 7.41258$

$N_{adm} = 19$ $N_{teach} = 47$

$S_{(\mu_{teach} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[(9.812867/19) + (7.41258/47)]} = \sqrt{(0.516467 + 0.157714)} = \sqrt{0.674181} = 0.821085$

t-statistic = $(\mu_{teach} - \mu_{adm})/s_{(\mu_{teach} - \mu_{adm})} = |(6.97872 - 6.42105)/0.821085| = 0.67919$

$df = N_{adm} + N_{teach} - 2 = 19 + 47 - 2 = 64$

The critical t-value for (df = 60, α = .05, one-tailed) = 1.671, and the critical t-value for (df = 80, α = .05, one-tailed) = 1.664. Therefore, the critical t-value for (df = 64, α = .05, one-tailed) lies between 1.664 and 1.671. The t-statistic for these data (0.67919) is **less than** the critical t-value (some value that lies in the region $1.664 < x < 1.671$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the school administrators for this survey item, "Ongoing formal assessment of professional performance" are **not** statistically significantly different from the rankings of the recently tenured teachers with a confidence interval of 95%.

T-TEST L.4.4

T-TEST Comparing SCHOOL ADMINISTRATORS with UNTENURED TEACHERS and RECENTLY TENURED TEACHERS for "Ongoing informal assessment of professional performance"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 19$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 92/19 = 4.84211$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 144.5263$

$S_{adm}^2 = S_{adm}/(N - 1) = 144.5263/18 = 8.029239$

$N_{teach} = 105$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 608/105 = 5.79048$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 569.3905$

$S_{teach}^2 = S_{teach}/(N - 1) = 569.3905/104 = 5.47491$

$N_{adm} = 19$ $N_{teach} = 105$

$S_{(\mu_{teach} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[(8.029239/19) + (5.47491/105)]} =$

$\sqrt{(0.422592 + 0.052142)} = \sqrt{0.474734} = 0.689009$

t-statistic = $(\mu_{teach} - \mu_{adm})/s_{(\mu_{teach} - \mu_{adm})} = |(4.84211 - 5.79048)/0.689009| = 1.37643$

df = $N_{adm} + N_{teach} - 2 = 19 + 105 - 2 = 122$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 122, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (1.37643) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the school administrators for this survey item, "Ongoing informal assessment of professional performance" are **not** statistically significantly different from the rankings of the recently tenured teachers and untenured teachers combined with a confidence interval of 95%.

T-TEST L.4.5

T-TEST Comparing VETERAN TEACHERS (VT) with UNTENURED TEACHERS and SCHOOL ADMINISTRATORS (UTSA) for "Administratively-set expectations and norms of teacher conduct, professional responsibilities, appearance, conduct, and identity"

H_0: $\mu_{vt} = \mu_{utsa}$ $\alpha = .05$

H_1: $\mu_{vt} \neq \mu_{utsa}$

$N_{vt} = 94$

$\mu_{vt} = \sum X_{vt} / N_{vt} = 504/94 = 5.36170$

$S_{vt} = \sum(X_{vt} - \mu_{vt})^2 = 717.7021$

$S_{vt}^2 = S_{vt}/(N - 1) = 717.7021/93 = 7.717227$

$N_{utsa} = 77$

$\mu_{utsa} = \sum X_{utsa} / N_{utsa} = 411/77 = 5.33766$

$S_{utsa} = \sum(X_{utsa} - \mu_{utsa})^2 = 523.2208$

$S_{utsa}^2 = S_{utsa}/(N - 1) = 523.2208/76 = 6.88448$

$N_{vt} = 94$ $N_{utsa} = 77$

$S_{(\mu_{utsa} - \mu_{vt})} = \sqrt{[(S_{vt}^2 / N_{vt}) + (S_{utsa}^2)/N_{utsa})]} = \sqrt{[(7.717227/94) + (6.88448/77)]} =$
$\sqrt{(0.082098 + 0.089409)} = \sqrt{0.171507} = 0.414134$

t-statistic $= (\mu_{utsa} - \mu_{vt})/s_{(\mu_{utsa} - \mu_{vt})} = |(5.33766 - 5.36170)/0.414134| = 0.05805$

df $= N_{vt} + N_{utsa} - 2 = 94 + 77 - 2 = 169$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 169, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (0.05805) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the veteran teachers for this survey item, "Administratively-set expectations and norms of teacher conduct, professional responsibilities, appearance, conduct, and identity" are **not** statistically significantly

different from the rankings of the untenured teachers and school administrators combined with a confidence interval of 95%.

T-TEST L.4.6

T-TEST Comparing RECENTLY TENURED TEACHERS (RTT) with UNTENURED TEACHERS and SCHOOL ADMINISTRATORS (UTSA) for "Administratively-set expectations and norms of teacher conduct, professional responsibilities, appearance, conduct, and identity"

H_0: $\mu_{rtt} = \mu_{utsa}$ $\alpha = .05$

H_1: $\mu_{rtt} \neq \mu_{utsa}$

$N_{rtt} = 47$

$\mu_{rtt} = \sum X_{rtt} / N_{rtt} = 288/47 = 6.12766$

$S_{rtt} = \sum(X_{rtt} - \mu_{rtt})^2 = 403.234$

$S_{rtt}^2 = S_{rtt}/(N - 1) = 403.234/46 = 8.76596$

$N_{utsa} = 77$

$\mu_{utsa} = \sum X_{utsa} / N_{utsa} = 411/77 = 5.33766$

$S_{utsa} = \sum(X_{utsa} - \mu_{utsa})^2 = 523.2208$

$S_{utsa}^2 = S_{utsa}/(N - 1) = 523.2208/76 = 6.88448$

$N_{rtt} = 47 \quad N_{utsa} = 77$

$S_{(\mu_{utsa} - \mu_{rtt})} = \sqrt{[(S_{rtt}^2 / N_{rtt}) + (S_{utsa}^2)/N_{utsa})]} = \sqrt{[(8.76596/47) + (6.88448/77)]} =$
$\sqrt{(0.18651 + 0.089409)} = \sqrt{0.275919} = 0.52528$

t-statistic = $(\mu_{utsa} - \mu_{rtt})/s_{(\mu_{utsa} - \mu_{rtt})} = |(5.33766 - 6.12766)/0.52528| = 1.50396$

df = $N_{rtt} + N_{utsa} - 2 = 47 + 77 - 2 = 122$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 122, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (1.50396) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the recently tenured teachers for this survey item, "Administratively-set expectations and norms of teacher conduct, professional

responsibilities, appearance, conduct, and identity" are **not** statistically significantly different from the rankings of the untenured teachers and school administrators combined with a confidence interval of 95%.

T-TEST L.4.7

T-TEST Comparing RECENTLY TENURED TEACHERS (RTT) with VETERAN TEACHERS (VT) for "Administratively-set expectations and norms of teacher conduct, professional responsibilities, appearance, conduct, and identity"

H_0: $\mu_{rtt} = \mu_{vt}$ $\alpha = .05$

H_1: $\mu_{rtt} \neq \mu_{vt}$

$N_{rtt} = 47$

$\mu_{rtt} = \sum X_{rtt} / N_{rtt} = 288/47 = 6.12766$

$S_{rtt} = \sum(X_{rtt} - \mu_{rtt})^2 = 403.234$

$S_{rtt}^2 = S_{rtt}/(N - 1) = 403.234/46 = 8.76596$

$N_{vt} = 94$

$\mu_{vt} = \sum X_{vt} / N_{vt} = 504/94 = 5.36170$

$S_{vt} = \sum(X_{vt} - \mu_{vt})^2 = 717.7021$

$S_{vt}^2 = S_{vt}/(N - 1) = 717.7021/93 = 7.717227$

$N_{rtt} = 47 \quad N_{vt} = 94$

$S_{(\mu_{vt} - \mu_{rtt})} = \sqrt{[(S_{rtt}^2 / N_{rtt}) + (S_{vt}^2)/N_{vt})]} = \sqrt{[(8.76596/47) + (7.717227/94)]} =$

$\sqrt{(0.18651 + 0.082098)} = \sqrt{0.268608} = 0.518274$

t-statistic = $(\mu_{vt} - \mu_{rtt})/s_{(\mu_{vt} - \mu_{rtt})} = |(5.36170 - 6.12766)/0.518274| = 1.47791$

df = $N_{rtt} + N_{vt} - 2 = 47 + 94 - 2 = 139$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 139, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (1.47791) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the recently tenured teachers for this survey item, "Administratively-set expectations and norms of teacher conduct, professional

responsibilities, appearance, conduct, and identity" are **not** statistically significantly different from the rankings of the veteran teachers with a confidence interval of 95%.

T-TEST L.4.8

T-TEST Comparing UNTENURED TEACHERS (UT) with RECENTLY TENURED TEACHERS and SCHOOL ADMINISTRATORS (RTADM) for "Learning what it means to be a professional and acquiring a professional vocabulary"

H_0: $\mu_{utt} = \mu_{rtadm}$ $\alpha = .05$

H_1: $\mu_{utt} \neq \mu_{rtadm}$

$N_{utt} = 47$

$\mu_{utt} = \sum X_{utt} / N_{utt} = 322/47 = 6.85106$

$S_{utt} = \sum(X_{utt} - \mu_{utt})^2 = 301.9574$

$S_{utt}^2 = S_{utt}/(N - 1) = 301.9574/46 = 6.56429$

$N_{rtadm} = 66$

$\mu_{rtadm} = \sum X_{rtadm} / N_{rtadm} = 444/66 = 6.72727$

$S_{rtadm} = \sum(X_{rtadm} - \mu_{rtadm})^2 = 447.0976$

$S_{rtadm}^2 = S_{rtadm}/(N - 1) = 447.0976/65 = 6.87842$

$N_{utt} = 47 \quad N_{rtadm} = 66$

$S_{(\mu_{rtadm} - \mu_{utt})} = \sqrt{[(S_{utt}^2 / N_{utt}) + (S_{rtadm}^2)/N_{rtadm})]} = \sqrt{[(6.56429/47) + (6.87842/66)]} = \sqrt{(0.139666 + 0.104218)} = \sqrt{0.243884} = 0.493847$

t-statistic $= (\mu_{rtadm} - \mu_{utt})/s_{(\mu_{rtadm} - \mu_{utt})} = |(6.72727 - 6.85106)/0.493847| = 0.25066$

$df = N_{utt} + N_{rtadm} - 2 = 47 + 66 - 2 = 111$

The critical t-value for (df = 100, α = .05, one-tailed) = 1.660, and the critical t-value for (df = 1000, α = .05, one-tailed) = 1.646. Therefore, the critical t-value for (df = 111, α = .05, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (0.25066) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the untenured teachers for this survey item, "Learning what it means to be a professional and acquiring a professional vocabulary"

are **not** statistically significantly different from the rankings of the recently tenured teachers and school administrators combined with a confidence interval of 95%.

T-TEST L.4.9

T-TEST Comparing SCHOOL ADMINISTRATORS with UNTENURED TEACHERS and RECENTLY TENURED TEACHERS for "Setting goals for self-improvement and transferring the acquired knowledge, skills, beliefs, and attitudes needed to succeed"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 19$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 109/19 = 5.73684$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 199.6842$

$S_{adm}^2 = S_{adm}/(N - 1) = 199.6842/18 = 11.09357$

$N_{teach} = 105$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 564/105 = 5.37143$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 1272.514$

$S_{teach}^2 = S_{teach}/(N - 1) = 1272.514/104 = 12.23571$

$N_{adm} = 19 \quad N_{teach} = 105$

$S_{(\mu_{teach} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[(11.09357/19) + (12.23571/105)]} = \sqrt{(0.583872 + 0.116531)} = \sqrt{0.700402} = 0.83690$

t-statistic = $(\mu_{teach} - \mu_{adm})/s_{(\mu_{teach} - \mu_{adm})} = |(5.37143 - 5.73684)/0.83690| = 0.436623$

df = $N_{adm} + N_{teach} - 2 = 19 + 105 - 2 = 122$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 122, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (0.436623) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the school administrators for this survey item, "Setting goals for self-improvement and transferring the acquired knowledge, skills, beliefs, and attitudes needed to succeed" are **not** statistically significantly different from

the rankings of the untenured teachers and recently tenured teachers combined with a confidence interval of 95%.

T-TEST L.4.10

T-TEST Comparing RECENTLY TENURED TEACHERS (RTT) with UNTENURED TEACHERS (UT) for "Have a working knowledge and understanding of teachers' legal liabilities and responsibilities"

H_0: $\mu_{rtt} = \mu_{ut}$ $\alpha = .05$

H_1: $\mu_{rtt} \neq \mu_{ut}$

$N_{rtt} = 47$

$\mu_{rtt} = \sum X_{rtt} / N_{rtt} = 266/47 = 5.65957$

$S_{rtt} = \sum(X_{rtt} - \mu_{rtt})^2 = 382.5532$

$S_{rtt}^2 = S_{rtt}/(N - 1) = 382.5532/46 = 8.31637$

$N_{ut} = 58$

$\mu_{ut} = \sum X_{ut} / N_{ut} = 372/58 = 6.41379$

$S_{ut} = \sum(X_{ut} - \mu_{ut})^2 = 464.069$

$S_{ut}^2 = S_{ut}/(N - 1) = 464.069/57 = 8.14156$

$N_{rtt} = 47 \quad N_{ut} = 58$

$S_{(\mu_{ut} - \mu_{rtt})} = \sqrt{[(S_{rtt}^2 / N_{rtt}) + (S_{ut}^2)/N_{ut})]} = \sqrt{[(8.31637/47) + (8.14156/58)]} =$
$\sqrt{(0.176944 + 0.140372)} = \sqrt{0.317316} = 0.563308$

t-statistic $= (\mu_{ut} - \mu_{rtt})/s_{(\mu_{ut} - \mu_{rtt})} = |(6.41379 - 5.65957)/0.563308| = 1.33891$

$df = N_{rtt} + N_{ut} - 2 = 47 + 58 - 2 = 103$

The critical t-value for (df = 100, α = .05, one-tailed) = 1.660, and the critical t-value for (df = 1000, α = .05, one-tailed) = 1.646. Therefore, the critical t-value for (df = 103, α = .05, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (1.33891) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the recently tenured teachers for this survey item, "Have a working knowledge and understanding of teachers' legal liabilities and

responsibilities" are **not** statistically significantly different from the rankings of the untenured teachers with a confidence interval of 95%.

T-TEST L.4.11

T-TEST Comparing SCHOOL ADMINISTRATORS with UNTENURED TEACHERS for "Have a working knowledge and understanding of teachers' legal liabilities and responsibilities"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 19$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 127/19 = 6.68421$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 166.1053$

$S_{adm}^2 = S_{adm}/(N - 1) = 166.1053/18 = 9.22807$

$N_{teach} = 58$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 372/58 = 6.41379$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 464.069$

$S_{teach}^2 = S_{teach}/(N - 1) = 464.069/57 = 8.14156$

$N_{adm} = 19 \quad N_{teach} = 58$

$S_{(\mu_{teach} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[(9.22807/19) + (8.14156/58)]} =$
$\sqrt{(0.485688 + 0.140372)} = \sqrt{0.62606} = 0.791239$

t-statistic $= (\mu_{teach} - \mu_{adm})/s_{(\mu_{teach} - \mu_{adm})} = |(6.41379 - 6.68421)/0.791239| = 0.341768$

$df = N_{adm} + N_{teach} - 2 = 19 + 58 - 2 = 75$

The critical t-value for (df = 60, α = .05, one-tailed) = 1.671, and the critical t-value for (df = 80, α = .05, one-tailed) = 1.664. Therefore, the critical t-value for (df = 75, α = .05, one-tailed) lies between 1.664 and 1.671. The t-statistic for these data (0.341768) is **less than** the critical t-value (some value that lies in the region $1.664 < x < 1.671$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the school administrators for this survey item, "Have a working knowledge and understanding of teachers' legal liabilities and

responsibilities" are **not** statistically significantly different from the rankings of the untenured teachers with a confidence interval of 95%.

T-TEST L.4.12

T-TEST Comparing SCHOOL ADMINISTRATORS with VETERAN TEACHERS for "Have a working knowledge and understanding of teachers' legal liabilities and responsibilities"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 19$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 127/19 = 6.68421$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 166.1053$

$S_{adm}^2 = S_{adm}/(N - 1) = 166.1053/18 = 9.22807$

$N_{teach} = 94$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 570/94 = 6.06383$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 691.617$

$S_{teach}^2 = S_{teach}/(N - 1) = 691.617/93 = 7.43674$

$N_{adm} = 19 \quad N_{teach} = 94$

$S_{(\mu_{teach} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[(9.22807/19) + (7.43674/94)]} = \sqrt{(0.485688 + 0.079114)} = \sqrt{0.564802} = 0.751533$

t-statistic $= (\mu_{teach} - \mu_{adm})/s_{(\mu_{teach} - \mu_{adm})} = |(6.06383 - 6.68421)/0.751533| = 0.825486$

$df = N_{adm} + N_{teach} - 2 = 19 + 94 - 2 = 111$

The critical t-value for (df = 100, α = .05, one-tailed) = 1.660, and the critical t-value for (df = 1000, α = .05, one-tailed) = 1.646. Therefore, the critical t-value for (df = 111, α = .05, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (0.825486) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the school administrators for this survey item, "Have a working knowledge and understanding of teachers' legal liabilities and

responsibilities" are **not** statistically significantly different from the rankings of the veteran teachers with a confidence interval of 95%.

T-TEST L.4.13

T-TEST Comparing SCHOOL ADMINISTRATORS with RECENTLY TENURED TEACHERS for "Have a working knowledge and understanding of teachers' legal liabilities and responsibilities"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 19$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 127/19 = 6.68421$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 166.1053$

$S_{adm}^2 = S_{adm}/(N - 1) = 166.1053/18 = 9.22807$

$N_{teach} = 47$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 266/47 = 5.65957$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 382.5532$

$S_{teach}^2 = S_{teach}/(N - 1) = 382.5532/46 = 8.316374$

$N_{adm} = 19 \quad N_{teach} = 47$

$S_{(\mu_{teach} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[(9.22807/19) + (8.316374/47)]} =$
$\sqrt{(0.485688 + 0.176944)} = \sqrt{0.662632} = 0.814022$

t-statistic $= (\mu_{teach} - \mu_{adm})/s_{(\mu_{teach} - \mu_{adm})} = |(5.65957 - 6.68421)/0.814022| = 1.258737$

$df = N_{adm} + N_{teach} - 2 = 19 + 47 - 2 = 64$

The critical t-value for (df = 60, α = .05, one-tailed) = 1.671, and the critical t-value for (df = 80, α = .05, one-tailed) = 1.664. Therefore, the critical t-value for (df = 64, α = .05, one-tailed) lies between 1.664 and 1.671. The t-statistic for these data (1.258737) is **less than** the critical t-value (some value that lies in the region $1.664 < x < 1.671$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the school administrators for this survey item, "Have a working knowledge and understanding of teachers' legal liabilities and

responsibilities" are **not** statistically significantly different from the rankings of the recently tenured teachers with a confidence interval of 95%.

T-TEST L.5.1

T-TEST Comparing UNTENURED TEACHERS and RECENTLY TENURED TEACHERS (UTRTT) with VETERAN TEACHERS and SCHOOL ADMINISTRATORS (VTSA) for "Being observed by the superintendent, principals, and/or other administrators"

H_0: $\mu_{utrtt} = \mu_{vtsa}$ $\alpha = .05$

H_1: $\mu_{utrtt} \neq \mu_{vtsa}$

$N_{utrtt} = 99$

$\mu_{utrtt} = \sum X_{utrtt} / N_{utrtt} = 557/99 = 5.62626$

$S_{utrtt} = \sum(X_{utrtt} - \mu_{utrtt})^2 = 681.1717$

$S_{utrtt}^2 = S_{utrtt}/(N - 1) = 681.1717/98 = 6.950732$

$N_{vtsa} = 106$

$\mu_{vtsa} = \sum X_{vtsa} / N_{vtsa} = 663/106 = 6.254717$

$S_{vtsa} = \sum(X_{vtsa} - \mu_{vtsa})^2 = 682.1226$

$S_{vtsa}^2 = S_{vtsa}/(N - 1) = 682.1226/105 = 6.496406$

$N_{utrtt} = 99$ $N_{vtsa} = 106$

$S_{(\mu_{vtsa} - \mu_{utrtt})} = \sqrt{[(S_{utrtt}^2 / N_{utrtt}) + (S_{vtsa}^2)/N_{vtsa})]} = \sqrt{[(6.950732/99) + (6.496406/106)]} = \sqrt{(0.070294 + 0.061287)} = \sqrt{0.131581} = 0.362741$

t-statistic $= (\mu_{vtsa} - \mu_{utrtt})/s_{(\mu_{vtsa} - \mu_{utrtt})} = |(6.254717 - 5.62626)/0.362741| = 1.732523$

$df = N_{utrtt} + N_{vtsa} - 2 = 99 + 106 - 2 = 203$

The critical t-value for ($df = 100$, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for ($df = 1000$, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for ($df = 203$, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (1.732523) is **greater than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This **falls** in the critical region. Therefore, **H_0 is rejected**.

The conclusion is that the rankings of the untenured teachers and the recently tenured teachers combined for this survey item, "Being observed by the superintendent, principals, and/or other administrators" **are statistically significantly different** from the

rankings of the veteran teachers and school administrators combined with a confidence interval of 95%.

T-TEST L.5.2

T-TEST Comparing UNTENURED TEACHERS (UT) with RECENTLY TENURED TEACHERS, VETERAN TEACHERS, and SCHOOL ADMINISTRATORS (RVS) for "Receiving formal written evaluations from an administrator that links teaching to student achievement"

H_0: $\mu_{ut} = \mu_{rvs}$ $\alpha = .05$

H_1: $\mu_{ut} \neq \mu_{rvs}$

$N_{ut} = 55$

$\mu_{ut} = \sum X_{ut} / N_{ut} = 291/55 = 5.290909$

$S_{ut} = \sum(X_{ut} - \mu_{ut})^2 = 221.3455$

$S_{ut}^2 = S_{ut}/(N - 1) = 221.3455/54 = 4.098991$

$N_{rvs} = 150$

$\mu_{rvs} = \sum X_{rvs} / N_{rvs} = 921/150 = 6.14$

$S_{rvs} = \sum(X_{rvs} - \mu_{rvs})^2 = 724.06$

$S_{rvs}^2 = S_{rvs}/(N - 1) = 724.06/149 = 4.89463$

$N_{ut} = 55$ $N_{rvs} = 150$

$S_{(\mu_{rvs} - \mu_{ut})} = \sqrt{[(S_{ut}^2 / N_{ut}) + (S_{rvs}^2)/N_{rvs})]} = \sqrt{[(4.098991/55) + (4.89463/150)]} =$
$\sqrt{(0.074527 + 0.032631)} = \sqrt{0.1071578} = 0.3273496$

t-statistic = $(\mu_{rvs} - \mu_{ut})/s_{(\mu_{rvs} - \mu_{ut})} = |(6.14 - 5.290909)/0.3273496| = 2.593835$

df = $N_{ut} + N_{rvs} - 2 = 55 + 150 - 2 = 203$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 203, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (2.593835) is **greater than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This **falls** in the critical region. Therefore, **H_0 is rejected**.

The conclusion is that the rankings of the untenured teachers for this survey item, "Receiving formal written evaluations from an administrator that links teaching to student achievement" **are statistically significantly different** from the rankings of the

recently tenured teachers, veteran teachers, and school administrators combined with a confidence interval of 95%.

T-TEST L.5.3

T-TEST Comparing VETERAN TEACHERS (VT) with RECENTLY TENURED TEACHERS (RTT) for "Mentors to help analyze student work and achievement"

H_0: $\mu_{vt} = \mu_{rtt}$ $\alpha = .05$

H_1: $\mu_{vt} \neq \mu_{rtt}$

$N_{vt} = 87$

$\mu_{vt} = \sum X_{vt} / N_{vt} = 439/87 = 5.045977$

$S_{vt} = \sum(X_{vt} - \mu_{vt})^2 = 447.8161$

$S_{vt}^2 = S_{vt}/(N - 1) = 447.8161/86 = 5.207164$

$N_{rtt} = 44$

$\mu_{rtt} = \sum X_{rtt} / N_{rtt} = 241/44 = 5.477273$

$S_{rtt} = \sum(X_{rtt} - \mu_{rtt})^2 = 196.9773$

$S_{rtt}^2 = S_{rtt}/(N - 1) = 196.9773/43 = 4.580867$

$N_{vt} = 87$ $N_{rtt} = 44$

$S_{(\mu_{rtt} - \mu_{vt})} = \sqrt{[(S_{vt}^2 / N_{vt}) + (S_{rtt}^2)/N_{rtt})]} = \sqrt{[(5.207164/87) + (4.580867/44)]} =$

$\sqrt{(0.059852 + 0.1041106)} = \sqrt{0.1639626} = 0.404923$

t-statistic = $(\mu_{rtt} - \mu_{vt})/s_{(\mu_{rtt} - \mu_{vt})} = |(5.045977 - 5.477273)/0.404923| = 1.065131$

df = $N_{vt} + N_{rtt} - 2 = 87 + 44 - 2 = 129$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 129, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (1.065131) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the veteran teachers for this survey item, "Mentors to help analyze student work and achievement" are **not** statistically significantly different from the rankings of the recently tenured teachers with a confidence interval of 95%.

T-TEST L.5.4

T-TEST Comparing VETERAN TEACHERS (VT) with SCHOOL ADMINISTRATORS (ADM) for "Mentors to help analyze student work and achievement"

H_0: $\mu_{vt} = \mu_{adm}$ $\alpha = .05$

H_1: $\mu_{vt} \neq \mu_{adm}$

$N_{vt} = 87$

$\mu_{vt} = \sum X_{vt} / N_{vt} = 439/87 = 5.045977$

$S_{vt} = \sum(X_{vt} - \mu_{vt})^2 = 447.8161$

$S_{vt}^2 = S_{vt}/(N - 1) = 447.8161/86 = 5.207164$

$N_{adm} = 19$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 114/19 = 6$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 102$

$S_{adm}^2 = S_{adm}/(N - 1) = 102/18 = 5.66667$

$N_{vt} = 87$ $N_{adm} = 19$

$S_{(\mu_{adm} - \mu_{vt})} = \sqrt{[(S_{vt}^2 / N_{vt}) + (S_{adm}^2)/N_{adm})]} = \sqrt{[(5.207164/87) + (5.66667/19)]} =$
$\sqrt{(0.059852 + 0.298246)} = \sqrt{0.358098} = 0.598413$

t-statistic $= (\mu_{adm} - \mu_{vt})/s_{(\mu_{adm} - \mu_{vt})} = |(5.045977 - 6)/0.598413| = 1.594255$

$df = N_{vt} + N_{adm} - 2 = 87 + 19 - 2 = 104$

The critical t-value for (df = 100, α = .05, one-tailed) = 1.660, and the critical t-value for (df = 1000, α = .05, one-tailed) = 1.646. Therefore, the critical t-value for (df = 104, α = .05, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (1.594255) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the veteran teachers for this survey item, "Mentors to help analyze student work and achievement" are **not** statistically significantly different from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.5.5

T-TEST Comparing VETERAN TEACHERS (VT) with UNTENURED TEACHERS (UT) for "Mentors to help analyze student work and achievement"

H_0: $\mu_{vt} = \mu_{ut}$ $\alpha = .05$

H_1: $\mu_{vt} \neq \mu_{ut}$

$N_{vt} = 87$

$\mu_{vt} = \sum X_{vt} / N_{vt} = 439/87 = 5.045977$

$S_{vt} = \sum(X_{vt} - \mu_{vt})^2 = 447.8161$

$S_{vt}^2 = S_{vt}/(N - 1) = 447.8161/86 = 5.207164$

$N_{ut} = 55$

$\mu_{ut} = \sum X_{ut} / N_{ut} = 294/55 = 5.345455$

$S_{ut} = \sum(X_{ut} - \mu_{ut})^2 = 242.4364$

$S_{ut}^2 = S_{ut}/(N - 1) = 242.4364/54 = 4.489563$

$N_{vt} = 87$ $N_{ut} = 55$

$S_{(\mu_{ut} - \mu_{vt})} = \sqrt{[(S_{vt}^2 / N_{vt}) + (S_{ut}^2)/N_{ut})]} = \sqrt{[(5.207164/87) + (4.489563/55)]} =$

$\sqrt{(0.059852 + 0.081628)} = \sqrt{0.14148} = 0.3761388$

t-statistic = $(\mu_{ut} - \mu_{vt})/s_{(\mu_{ut} - \mu_{vt})} = |(5.045977 - 5.345455)/0.3761388| = 0.796190$

df = $N_{vt} + N_{ut} - 2 = 87 + 55 - 2 = 140$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 140, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (0.796190) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the veteran teachers for this survey item, "Mentors to help analyze student work and achievement" are **not** statistically significantly different from the rankings of the untenured teachers with a confidence interval of 95%.

T-TEST L.5.6

T-TEST Comparing VETERAN TEACHERS (VT) with UNTENURED TEACHERS and RECENTLY TENURED TEACHERS (UTRTT) for "Supervision is distributed throughout the faculty in an organized, consistent, and continuous program"

H_0: $\mu_{vt} = \mu_{utrtt}$ $\alpha = .05$

H_1: $\mu_{vt} \neq \mu_{utrtt}$

$N_{vt} = 87$

$\mu_{vt} = \sum X_{vt} / N_{vt} = 537/87 = 6.172414$

$S_{vt} = \sum(X_{vt} - \mu_{vt})^2 = 616.4138$

$S_{vt}^2 = S_{vt}/(N - 1) = 616.4138/86 = 7.167602$

$N_{utrtt} = 99$

$\mu_{utrtt} = \sum X_{utrtt} / N_{utrtt} = 612/99 = 6.181818$

$S_{utrtt} = \sum(X_{utrtt} - \mu_{utrtt})^2 = 802.7273$

$S_{utrtt}^2 = S_{utrtt}/(N - 1) = 802.7273/98 = 8.191095$

$N_{vt} = 87$ $N_{utrtt} = 99$

$S_{(\mu_{utrtt} - \mu_{vt})} = \sqrt{[(S_{vt}^2 / N_{vt}) + (S_{utrtt}^2)/N_{utrtt})]} = \sqrt{[(7.167602/87) + (8.191095/99)]} =$

$\sqrt{(0.082386 + 0.082738)} = \sqrt{0.1651243} = 0.4063548$

t-statistic = $(\mu_{utrtt} - \mu_{vt})/s_{(\mu_{utrtt} - \mu_{vt})} = |(6.172414 - 6.181818)/0.4063548| = 0.0231423$

df = $N_{vt} + N_{utrtt} - 2 = 87 + 99 - 2 = 184$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 184, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (0.0231423) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the veteran teachers for this survey item, "Supervision is distributed throughout the faculty in an organized, consistent, and continuous program" are **not** statistically significantly different from the rankings of the untenured teachers and recently tenured teachers combined with a confidence interval of 95%.

T-TEST L.5.7

T-TEST Comparing SCHOOL ADMINISTRATORS (ADM) with UNTENURED TEACHERS and RECENTLY TENURED TEACHERS (UTRTT) for "Supervision is distributed throughout the faculty in an organized, consistent, and continuous program"

H_0: $\mu_{adm} = \mu_{utrtt}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{utrtt}$

$N_{adm} = 19$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 106/19 = 5.578947$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 186.6316$

$S_{adm}^2 = S_{adm}/(N - 1) = 186.6316/18 = 10.368422$

$N_{utrtt} = 99$

$\mu_{utrtt} = \sum X_{utrtt} / N_{utrtt} = 612/99 = 6.181818$

$S_{utrtt} = \sum(X_{utrtt} - \mu_{utrtt})^2 = 802.7273$

$S_{utrtt}^2 = S_{utrtt}/(N - 1) = 802.7273/98 = 8.191095$

$N_{adm} = 19$ $N_{utrtt} = 99$

$S_{(\mu_{utrtt} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{utrtt}^2)/N_{utrtt})]} = \sqrt{[(10.368422/19) + (8.191095/99)]} = \sqrt{(0.5457064 + 0.082738)} = \sqrt{0.6284444} = 0.7927448$

t-statistic $= (\mu_{utrtt} - \mu_{adm})/s_{(\mu_{utrtt} - \mu_{adm})} = |(5.578947 - 6.181818)/0.7927448| = 0.760486$

df $= N_{adm} + N_{utrtt} - 2 = 19 + 99 - 2 = 116$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 116, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (0.760486) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the school administrators for this survey item, "Supervision is distributed throughout the faculty in an organized, consistent, and continuous program" are **not** statistically significantly different from the rankings of the untenured teachers and recently tenured teachers combined with a confidence interval of 95%.

T-TEST L.5.8

T-TEST Comparing SCHOOL ADMINISTRATORS with UNTENURED TEACHERS for "Informal visits and conversations and receiving informal administrative feedback"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 19$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 83/19 = 4.368421$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 40.42105$

$S_{adm}^2 = S_{adm}/(N - 1) = 40.42105/18 = 2.245611$

$N_{teach} = 55$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 286/55 = 5.2$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 304.8$

$S_{teach}^2 = S_{teach}/(N - 1) = 304.8/54 = 5.64444$

$N_{adm} = 19$ $N_{teach} = 55$

$S_{(\mu_{teach} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[(2.245611/19) + (5.64444/55)]} = \sqrt{(0.11819 + 0.1026261)} = \sqrt{0.2208161} = 0.4699107$

t-statistic = $(\mu_{teach} - \mu_{adm})/s_{(\mu_{teach} - \mu_{adm})} = |(5.2 - 4.368421)/0.4699107| = 1.769653$

df = $N_{adm} + N_{teach} - 2 = 19 + 55 - 2 = 72$

The critical t-value for (*df* = 60, $\alpha = .05$, one-tailed) = 1.671, and the critical t-value for (*df* = 80, $\alpha = .05$, one-tailed) = 1.664. Therefore, the critical t-value for (*df* = 72, $\alpha = .05$, one-tailed) lies between 1.664 and 1.671. The t-statistic for these data (1.769653) is **greater than** the critical t-value (some value that lies in the region $1.664 < x < 1.671$), also rendering interpolation of the actual critical t-value unnecessary. This **falls** in the critical region. Therefore, **H_0 is rejected**.

The conclusion is that the rankings of the school administrators for this survey item, "Informal visits and conversations and receiving informal administrative feedback" **are statistically significantly different** from the rankings of the untenured teachers with a confidence interval of 95%.

T-TEST L.5.9

T-TEST Comparing SCHOOL ADMINISTRATORS with VETERAN TEACHERS for "Informal visits and conversations and receiving informal administrative feedback"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 19$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 83/19 = 4.368421$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 40.42105$

$S_{adm}^2 = S_{adm}/(N - 1) = 40.42105/18 = 2.245611$

$N_{teach} = 87$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 458/87 = 5.264368$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 380.9195$

$S_{teach}^2 = S_{teach}/(N - 1) = 380.9195/86 = 4.429297$

$N_{adm} = 19$ $N_{teach} = 87$

$S_{(\mu_{teach} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[(2.245611/19) + (4.429297/87)]} =$

$\sqrt{(0.11819 + 0.0509114} = \sqrt{0.169101} = 0.4112194$

t-statistic = $(\mu_{teach} - \mu_{adm})/s_{(\mu_{teach} - \mu_{adm})} = |(5.264368 - 4.368421)/0.4112194| = 2.178757$

df = $N_{adm} + N_{teach} - 2 = 19 + 87 - 2 = 104$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 116, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (2.178757) is **greater than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This **falls** in the critical region. Therefore, **H_0 is rejected**.

The conclusion is that the rankings of the school administrators for this survey item, "Informal visits and conversations and receiving informal administrative feedback" **are statistically significantly different** from the rankings of the veteran teachers with a confidence interval of 95%.

T-TEST L.5.10

T-TEST Comparing RECENTLY TENURED TEACHERS (RTT) with VETERAN TEACHERS (VT) for "Informal visits and conversations and receiving informal administrative feedback"

H_0: $\mu_{rtt} = \mu_{vt}$ $\alpha = .05$

H_1: $\mu_{rtt} \neq \mu_{vt}$

$N_{rtt} = 44$

$\mu_{rtt} = \sum X_{rtt} / N_{rtt} = 213/44 = 4.840909$

$S_{rtt} = \sum(X_{rtt} - \mu_{rtt})^2 = 231.7763$

$S_{rtt}^2 = S_{rtt}/(N - 1) = 231.7763/43 = 5.390147$

$N_{vt} = 87$

$\mu_{vt} = \sum X_{vt} / N_{vt} = 458/87 = 5.264368$

$S_{vt} = \sum(X_{vt} - \mu_{vt})^2 = 380.9195$

$S_{vt}^2 = S_{vt}/(N - 1) = 380.9195/86 = 4.429297$

$N_{rtt} = 44$ $N_{vt} = 87$

$S_{(\mu_{vt} - \mu_{rtt})} = \sqrt{[(S_{rtt}^2 / N_{rtt}) + (S_{vt}^2)/N_{vt})]} = \sqrt{[(5.390147/44) + (4.429297/87)]} =$

$\sqrt{(0.1225033 + 0.0509114 = \sqrt{0.1734147} = 0.416431$

t-statistic = $(\mu_{vt} - \mu_{rtt})/s_{(\mu_{vt} - \mu_{rtt})} = |(5.264368 - 4.840909)/0.416431| = 1.016877$

df = $N_{rtt} + N_{vt} - 2 = 44 + 87 - 2 = 129$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 129, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (1.016877) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the school administrators for this survey item, "Informal visits and conversations and receiving informal administrative feedback" are **not** statistically significantly different from the rankings of the veteran teachers with a confidence interval of 95%.

T-TEST L.6.1

T-TEST Comparing SCHOOL ADMINISTRATORS with UNTENURED TEACHERS for "Having a 'start-of-school' checklist"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 18$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 112/18 = 6.22222$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 193.1111$

$S_{adm}^2 = S_{adm}/(N - 1) = 193.1111/17 = 11.35948$

$N_{teach} = 51$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 240/51 = 4.70588$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 540.5882$

$S_{teach}^2 = S_{teach}/(N - 1) = 540.5882/50 = 10.81176$

$N_{adm} = 18$ $N_{teach} = 51$

$S_{(\mu_{teach} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[(11.35948/18) + (10.81176/51)]} =$
$\sqrt{(0.631082 + 0.211995)} = \sqrt{0.8430772} = 0.9181923$

t-statistic = $(\mu_{teach} - \mu_{adm})/s_{(\mu_{teach} - \mu_{adm})} = |(4.70588 - 6.22222)/0.9181923| = 1.65144$

df = $N_{adm} + N_{teach} - 2 = 18 + 51 - 2 = 67$

The critical t-value for (*df* = 60, $\alpha = .05$, one-tailed) = 1.671, and the critical t-value for (*df* = 80, $\alpha = .05$, one-tailed) = 1.664. Therefore, the critical t-value for (*df* = 67, $\alpha = .05$, one-tailed) lies between 1.664 and 1.671. The t-statistic for these data (1.65144) is **less than** the critical t-value (some value that lies in the region $1.664 < x < 1.671$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the school administrators for this survey item, "Having a 'start-of-school' checklist" are **not** statistically significantly different from the rankings of the untenured teachers with a confidence interval of 95%.

T-TEST L.6.2

T-TEST Comparing SCHOOL ADMINISTRATORS with RECENTLY TENURED TEACHERS and VETERAN TEACHERS for "Having a 'start-of-school' checklist"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 18$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 112/18 = 6.22222$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 193.1111$

$S_{adm}^2 = S_{adm}/(N - 1) = 193.1111/17 = 11.35948$

$N_{teach} = 123$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 657/123 = 5.341463$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 1121.659$

$S_{teach}^2 = S_{teach}/(N - 1) = 1121.659/122 = 9.193926$

$N_{adm} = 18$ $N_{teach} = 123$

$S_{(\mu_{teach} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[(11.35948/18) + (9.193926/123)]} = \sqrt{(0.631082 + 0.074747)} = \sqrt{0.7058293} = 0.840136$

t-statistic = $(\mu_{teach} - \mu_{adm})/s_{(\mu_{teach} - \mu_{adm})} = |(5.341463 - 6.22222)/0.840136| = 1.048351$

$df = N_{adm} + N_{teach} - 2 = 18 + 123 - 2 = 139$

The critical t-value for (df = 100, α = .05, one-tailed) = 1.660, and the critical t-value for (df = 1000, α = .05, one-tailed) = 1.646. Therefore, the critical t-value for (df = 139, α = .05, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (1.048351) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the school administrators for this survey item, "Having a 'start-of-school' checklist" are **not** statistically significantly different from the rankings of the untenured teachers and the veteran teachers combined with a confidence interval of 95%.

T-TEST L.6.3

T-TEST Comparing RECENTLY TENURED TEACHERS and SCHOOL ADMINISTRATORS (RTTSA) with UNTENURED TEACHERS and VETERAN TEACHERS (UTVT) for "Effective time management with high levels of time on task"

H_0: $\mu_{rttsa} = \mu_{utvt}$ $\alpha = .05$

H_1: $\mu_{rttsa} \neq \mu_{utvt}$

$N_{rttsa} = 60$

$\mu_{rttsa} = \sum X_{rttsa} / N_{rttsa} = 311/60 = 5.183333$

$S_{rttsa} = \sum(X_{rttsa} - \mu_{rttsa})^2 = 390.9833$

$S_{rttsa}^2 = S_{rttsa}/(N - 1) = 390.9833/59 = 6.626836$

$N_{utvt} = 132$

$\mu_{utvt} = \sum X_{utvt} / N_{utvt} = 797/132 = 6.037879$

$S_{utvt} = \sum(X_{utvt} - \mu_{utvt})^2 = 790.8106$

$S_{utvt}^2 = S_{utvt}/(N - 1) = 790.8106/131 = 6.036722$

$N_{rttsa} = 60$ $N_{utvt} = 132$

$S_{(\mu_{utvt} - \mu_{rttsa})} = \sqrt{[(S_{rttsa}^2 / N_{rttsa}) + (S_{utvt}^2)/N_{utvt})]} = \sqrt{[(6.626836/60) + (6.036722/132)]} =$
$\sqrt{(0.110447 + 0.0457327)} = \sqrt{0.1561797} = 0.3951957$

t-statistic = $(\mu_{utvt} - \mu_{rttsa})/s_{(\mu_{utvt} - \mu_{rttsa})} = |(6.037879 - 5.183333)/0.3951957| = 2.162336$

df = $N_{rttsa} + N_{utvt} - 2 = 60 + 132 - 2 = 190$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 190, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (2.162336) is **greater than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This **falls** in the critical region. Therefore, **H_0 is rejected**.

The conclusion is that the rankings of the recently tenured teachers and the school administrators combined for this survey item, "Effective time management with high student levels of time on task" **are statistically significantly different** from the rankings of the untenured teachers and the veteran teachers combined with a confidence interval of 95%.

T-TEST L.6.4

T-TEST Comparing UNTENURED TEACHERS and VETERAN TEACHERS (UTVT) with RECENTLY TENURED TEACHERS (RTT) for "Identifying and dealing with individual students' needs, interests, abilities, and problems"

H_0: $\mu_{utvt} = \mu_{rtt}$ $\alpha = .05$

H_1: $\mu_{utvt} \neq \mu_{rtt}$

$N_{utvt} = 132$

$\mu_{utvt} = \sum X_{utvt} / N_{utvt} = 741/132 = 5.613636$

$S_{utvt} = \sum(X_{utvt} - \mu_{utvt})^2 = 897.2955$

$S_{utvt}^2 = S_{utvt}/(N - 1) = 897.2955/131 = 6.849584$

$N_{rtt} = 42$

$\mu_{rtt} = \sum X_{rtt} / N_{rtt} = 250/42 = 5.952381$

$S_{rtt} = \sum(X_{rtt} - \mu_{rtt})^2 = 325.9048$

$S_{rtt}^2 = S_{rtt}/(N - 1) = 325.9048/41 = 7.948898$

$N_{utvt} = 132$ $N_{rtt} = 42$

$S_{(\mu_{rtt} - \mu_{utvt})} = \sqrt{[(S_{utvt}^2 / N_{utvt}) + (S_{rtt}^2)/N_{rtt})]} = \sqrt{[(6.849584/132) + (7.948898/42)]} =$
$\sqrt{(0.051891 + 0.189259)} = \sqrt{0.2411504} = 0.491071$

t-statistic $= (\mu_{rtt} - \mu_{utvt})/s_{(\mu_{rtt} - \mu_{utvt})} = |(5.952381 - 5.613636)/0.491071| = 0.689809$

df $= N_{utvt} + N_{rtt} - 2 = 132 + 42 - 2 = 172$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 172, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (0.689809) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the untenured teachers and veteran teachers combined for this survey item, "Identifying and dealing with individual students' needs, interests, abilities, and problems" are **not** statistically significantly different from the rankings of the recently tenured teachers with a confidence interval of 95%.

T-TEST L.6.5

T-TEST Comparing SCHOOL ADMINISTRATORS with RECENTLY TENURED TEACHERS for "Identifying and dealing with individual students' needs, interests, abilities, and problems"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 18$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 102/18 = 5.66667$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 110$

$S_{adm}^2 = S_{adm}/(N - 1) = 110/17 = 6.470588$

$N_{teach} = 42$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 250/42 = 5.952381$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 325.9048$

$S_{teach}^2 = S_{teach}/(N - 1) = 325.9048/41 = 7.948898$

$N_{adm} = 18$ $N_{teach} = 42$

$S_{(\mu_{teach} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[(6.470588/18) + (7.948898/42)]} = \sqrt{(0.359771 + 0.189259)} = \sqrt{0.5490304} = 0.7409658$

t-statistic = $(\mu_{teach} - \mu_{adm})/s_{(\mu_{teach} - \mu_{adm})} = |(5.952381 - 5.66667)/0.7409658| = 0.3855926$

$df = N_{adm} + N_{teach} - 2 = 18 + 42 - 2 = 58$

The critical t-value for ($df = 50$, $\alpha = .05$, one-tailed) = 1.676, and the critical t-value for ($df = 60$, $\alpha = .05$, one-tailed) = 1.671. Therefore, the critical t-value for ($df = 58$, $\alpha = .05$, one-tailed) lies between 1.671 and 1.676. The t-statistic for these data (0.3855926) is **less than** the critical t-value (some value that lies in the region $1.671 < x < 1.676$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the school administrators for this survey item, "Identifying and dealing with individual students' needs, interests, abilities, and problems" are **not** statistically significantly different from the rankings of the recently tenured teachers with a confidence interval of 95%.

T-TEST L.6.6

T-TEST Comparing VETERAN TEACHERS and SCHOOL ADMINISTRATORS (VTSA) with RECENTLY TENURED TEACHERS (RTT) for "Avoiding 'down-time' strategies and set of quick and easy backups for when things don't go as expected"

H_0: $\mu_{vtsa} = \mu_{rtt}$ $\alpha = .05$

H_1: $\mu_{vtsa} \neq \mu_{rtt}$

$N_{vtsa} = 99$

$\mu_{vtsa} = \sum X_{vtsa} / N_{vtsa} = 693/99 = 7$

$S_{vtsa} = \sum(X_{vtsa} - \mu_{vtsa})^2 = 680$

$S_{vtsa}^2 = S_{vtsa}/(N - 1) = 680/98 = 6.938776$

$N_{rtt} = 42$

$\mu_{rtt} = \sum X_{rtt} / N_{rtt} = 243/42 = 5.785714$

$S_{rtt} = \sum(X_{rtt} - \mu_{rtt})^2 = 349.0714$

$S_{rtt}^2 = S_{rtt}/(N - 1) = 349.0714/41 = 8.513937$

$N_{vtsa} = 99$ $N_{rtt} = 42$

$S_{(\mu_{rtt} - \mu_{vtsa})} = \sqrt{[(S_{vtsa}^2 / N_{vtsa}) + (S_{rtt}^2)/N_{rtt})]} = \sqrt{[(6.938776/99) + (8.513937/42)]} =$
$\sqrt{(0.0700886 + 0.2027127)} = \sqrt{0.2728013} = 0.5223038$

t-statistic = $(\mu_{rtt} - \mu_{vtsa})/s_{(\mu_{rtt} - \mu_{vtsa})} = |(5.785714 - 7)/0.5223038| = 2.324865$

df = $N_{vtsa} + N_{rtt} - 2 = 99 + 42 - 2 = 139$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 139, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (2.324865) is **greater than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This **falls** in the critical region. Therefore, **H_0 is rejected**.

The conclusion is that the rankings of the veteran teachers and school administrators combined for this survey item, "Avoiding 'down-time' strategies and set of quick and easy backups for when things don't go as expected" **are statistically significantly different** from the rankings of the recently tenured teachers with a confidence interval of 95%.

T-TEST L.6.7

T-TEST Comparing UNTENURED TEACHERS (UT) with RECENTLY TENURED TEACHERS (RTT) for "Avoiding 'down-time' strategies and set of quick and easy backups for when things don't go as expected"

H_0: $\mu_{ut} = \mu_{rtt}$ $\alpha = .05$

H_1: $\mu_{ut} \neq \mu_{rtt}$

$N_{ut} = 51$

$\mu_{ut} = \sum X_{ut} / N_{ut} = 363/51 = 7.117647$

$S_{ut} = \sum(X_{ut} - \mu_{ut})^2 = 405.2941$

$S_{ut}^2 = S_{ut}/(N - 1) = 405.2941/50 = 8.105882$

$N_{rtt} = 42$

$\mu_{rtt} = \sum X_{rtt} / N_{rtt} = 243/42 = 5.785714$

$S_{rtt} = \sum(X_{rtt} - \mu_{rtt})^2 = 349.0714$

$S_{rtt}^2 = S_{rtt}/(N - 1) = 349.0714/41 = 8.513937$

$N_{ut} = 51$ $N_{rtt} = 42$

$S_{(\mu_{rtt} - \mu_{ut})} = \sqrt{[(S_{ut}^2 / N_{ut}) + (S_{rtt}^2)/N_{rtt})]} = \sqrt{[(8.105882/51) + (8.513937/42)]} =$

$\sqrt{(0.1589388 + 0.2027127)} = \sqrt{0.3616515} = 0.6013746$

t-statistic = $(\mu_{rtt} - \mu_{ut})/s_{(\mu_{rtt} - \mu_{ut})} = |(5.785714 - 7.117647)/0.6013746| = 2.214814$

df = $N_{ut} + N_{rtt} - 2 = 51 + 42 - 2 = 91$

The critical t-value for (*df* = 80, $\alpha = .05$, one-tailed) = 1.664, and the critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660. Therefore, the critical t-value for (*df* = 91, $\alpha = .05$, one-tailed) lies between 1.660 and 1.664. The t-statistic for these data (2.214814) is **greater than** the critical t-value (some value that lies in the region $1.660 < x < 1.664$), also rendering interpolation of the actual critical t-value unnecessary. This **falls** in the critical region. Therefore, **H_0 is rejected**.

The conclusion is that the rankings of the untenured teachers for this survey item, "Avoiding 'down-time' strategies and set of quick and easy backups for when things don't go as expected" **are statistically significantly different** from the rankings of the recently tenured teachers with a confidence interval of 95%.

T-TEST L.6.8

T-TEST Comparing SCHOOL ADMINISTRATORS with VETERAN TEACHERS for "Maintaining accurate records and documentation"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 18$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 111/18 = 6.166667$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 174.5$

$S_{adm}^2 = S_{adm}/(N - 1) = 174.5/17 = 10.26471$

$N_{teach} = 81$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 406/81 = 5.012346$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 390.9877$

$S_{teach}^2 = S_{teach}/(N - 1) = 390.9877/80 = 4.887346$

$N_{adm} = 18$ $N_{teach} = 81$

$S_{(\mu_{teach} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[(10.26471/18) + (4.887346/81)]} =$
$\sqrt{(0.570262 + 0.0603376)} = \sqrt{0.6305996} = 0.794103$

t-statistic = $(\mu_{teach} - \mu_{adm})/s_{(\mu_{teach} - \mu_{adm})} = |(5.012346 - 6.16667)/0.794103| = 1.45362$

df = $N_{adm} + N_{teach} - 2 = 18 + 81 - 2 = 97$

The critical t-value for (*df* = 80, $\alpha = .05$, one-tailed) = 1.664, and the critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660. Therefore, the critical t-value for (*df* = 97, $\alpha = .05$, one-tailed) lies between 1.660 and 1.664. The t-statistic for these data (1.45362) is **less than** the critical t-value (some value that lies in the region $1.660 < x < 1.664$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the school administrators for this survey item, "Maintaining accurate records and documentation" are **not** statistically significantly different from the rankings of the veteran teachers with a confidence interval of 95%.

T-TEST L.6.9

T-TEST Comparing RECENTLY TENURED TEACHERS (RTT) with VETERAN TEACHERS (VT) for "Maintaining accurate records and documentation"

H_0: $\mu_{rtt} = \mu_{vt}$ $\alpha = .05$

H_1: $\mu_{rtt} \neq \mu_{vt}$

$N_{rtt} = 42$

$\mu_{rtt} = \sum X_{rtt} / N_{rtt} = 257/42 = 6.119048$

$S_{rtt} = \sum(X_{rtt} - \mu_{rtt})^2 = 316.4048$

$S_{rtt}^2 = S_{rtt}/(N - 1) = 316.4048/41 = 7.71719$

$N_{vt} = 81$

$\mu_{vt} = \sum X_{vt} / N_{vt} = 406/81 = 5.012346$

$S_{vt} = \sum(X_{vt} - \mu_{vt})^2 = 390.9877$

$S_{vt}^2 = S_{vt}/(N - 1) = 390.9877/80 = 4.887346$

$N_{rtt} = 42$ $N_{vt} = 81$

$S_{(\mu_{vt} - \mu_{rtt})} = \sqrt{[(S_{rtt}^2 / N_{rtt}) + (S_{vt}^2)/N_{vt})]} = \sqrt{[(7.71710/42) + (4.887346/81)]} =$
$\sqrt{(0.1837426 + 0.0603376)} = \sqrt{0.2440802} = 0.4940447$

t-statistic $= (\mu_{vt} - \mu_{rtt})/s_{(\mu_{vt} - \mu_{rtt})} = |(5.012346 - 6.119048)/0.4940447| = 2.240085$

$df = N_{rtt} + N_{vt} - 2 = 42 + 81 - 2 = 123$

The critical t-value for (df = 100, α = .05, one-tailed) = 1.660, and the critical t-value for (df = 1000, α = .05, one-tailed) = 1.646. Therefore, the critical t-value for (df = 123, α = .05, one-tailed) lies between 1.646 and 1.660. The t-statistic for these data (2.240085) is **greater than** the critical t-value (some value that lies in the region $1.646 < x < 1.660$), also rendering interpolation of the actual critical t-value unnecessary. This **falls** in the critical region. Therefore, **H_0 is rejected**.

The conclusion is that the rankings of the recently tenured teachers for this survey item, "Maintaining accurate records and documentation" **are statistically significantly different** from the rankings of the veteran teachers with a confidence interval of 95%.

T-TEST L.6.10

T-TEST Comparing SCHOOL ADMINISTRATORS with UNTENURED TEACHERS for "Maintaining accurate records and documentation"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 18$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 111/18 = 6.166667$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 174.5$

$S_{adm}^2 = S_{adm}/(N - 1) = 174.5/17 = 10.26471$

$N_{teach} = 51$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 273/51 = 5.352941$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 307.6471$

$S_{teach}^2 = S_{teach}/(N - 1) = 307.6471/50 = 6.152942$

$N_{adm} = 18$ $N_{teach} = 51$

$S_{(\mu_{teach} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[(10.26471/18) + (6.152942/51)]} = \sqrt{(0.570262 + 0.1206459)} = \sqrt{0.690908} = 0.8312086$

t-statistic $= (\mu_{teach} - \mu_{adm})/s_{(\mu_{teach} - \mu_{adm})} = |(5.352941 - 6.16667)/0.8312086| = 0.978971$

$df = N_{adm} + N_{teach} - 2 = 18 + 51 - 2 = 67$

The critical t-value for (df = 60, α = .05, one-tailed) = 1.671, and the critical t-value for (df = 80, α = .05, one-tailed) = 1.664. Therefore, the critical t-value for (df = 67, α = .05, one-tailed) lies between 1.664 and 1.671. The t-statistic for these data (0.978971) is **less than** the critical t-value (some value that lies in the region $1.664 < x < 1.671$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the school administrators for this survey item, "Maintaining accurate records and documentation" are **not** statistically significantly different from the rankings of the untenured teachers with a confidence interval of 95%.

T-TEST L.6.11

T-TEST Comparing RECENTLY TENURED TEACHERS (RTT) with UNTENURED TEACHERS (RT) for "Maintaining accurate records and documentation"

H_0: $\mu_{rtt} = \mu_{ut}$ $\alpha = .05$

H_1: $\mu_{rtt} \neq \mu_{ut}$

$N_{rtt} = 42$

$\mu_{rtt} = \sum X_{rtt} / N_{rtt} = 257/42 = 6.119048$

$S_{rtt} = \sum(X_{rtt} - \mu_{rtt})^2 = 316.4048$

$S_{rtt}^2 = S_{rtt}/(N - 1) = 316.4048/41 = 7.71719$

$N_{ut} = 51$

$\mu_{ut} = \sum X_{ut} / N_{ut} = 273/51 = 5.352941$

$S_{ut} = \sum(X_{ut} - \mu_{ut})^2 = 307.6471$

$S_{ut}^2 = S_{ut}/(N - 1) = 307.6471/50 = 6.152942$

$N_{rtt} = 42$ $N_{ut} = 51$

$S_{(\mu_{ut} - \mu_{rtt})} = \sqrt{[(S_{rtt}^2 / N_{rtt}) + (S_{ut}^2)/N_{ut})]} = \sqrt{[(7.71719/42) + (6.152942/51)]} =$

$\sqrt{(0.183743 + 0.1206459)} = \sqrt{0.3043885} = 0.5517141$

t-statistic = $(\mu_{ut} - \mu_{rtt})/s_{(\mu_{ut} - \mu_{rtt})} = |(5.352941 - 6.119048)/0.5517141| = 1.385942$

df = $N_{rtt} + N_{ut} - 2 = 42 + 51 - 2 = 91$

The critical t-value for (*df* = 80, $\alpha = .05$, one-tailed) = 1.664, and the critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660. Therefore, the critical t-value for (*df* = 91, $\alpha = .05$, one-tailed) lies between 1.660 and 1.664. The t-statistic for these data (1.385942) is **less than** the critical t-value (some value that lies in the region $1.660 < x < 1.664$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the recently tenured teachers for this survey item, "Maintaining accurate records and documentation" are **not** statistically significantly different from the rankings of the untenured teachers with a confidence interval of 95%.

T-TEST L.6.12

T-TEST Comparing SCHOOL ADMINISTRATORS with RECENTLY TENURED TEACHERS for "Maintaining accurate records and documentation"

H_0: $\mu_{adm} = \mu_{teach}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{teach}$

$N_{adm} = 18$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 111/18 = 6.166667$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 174.5$

$S_{adm}^2 = S_{adm}/(N - 1) = 174.5/17 = 10.26471$

$N_{teach} = 42$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 257/42 = 6.119048$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 316.4048$

$S_{teach}^2 = S_{teach}/(N - 1) = 316.4048/41 = 7.71719$

$N_{adm} = 18$ $N_{teach} = 42$

$S_{(\mu_{teach} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{teach}^2)/N_{teach})]} = \sqrt{[(10.26471/18) + (7.71719/42)]} = \sqrt{(0.570262 + 0.1837426)} = \sqrt{0.7540046} = 0.8683343$

t-statistic = $(\mu_{teach} - \mu_{adm})/s_{(\mu_{teach} - \mu_{adm})} = |(6.119048 - 6.16667)/0.8683343| = 0.0548429$

$df = N_{adm} + N_{teach} - 2 = 18 + 42 - 2 = 58$

The critical t-value for ($df = 50$, $\alpha = .05$, one-tailed) = 1.676, and the critical t-value for ($df = 60$, $\alpha = .05$, one-tailed) = 1.671. Therefore, the critical t-value for ($df = 58$, $\alpha = .05$, one-tailed) lies between 1.671 and 1.676. The t-statistic for these data (0.0548429) is **less than** the critical t-value (some value that lies in the region $1.671 < x < 1.676$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the school administrators for this survey item, "Maintaining accurate records and documentation" are **not** statistically significantly different from the rankings of the recently tenured teachers with a confidence interval of 95%.

T-TEST L.7.1

T-TEST Comparing UNTENURED TEACHERS (UT) with RECENTLY TENURED TEACHERS, VETERAN TEACHERS, and SCHOOL ADMINISTRATORS (RVS) for "Knowledge of teaching resources, subject/curriculum, pedagogical content, and ways of teaching specific subject matter"

H_0: $\mu_{ut} = \mu_{rvs}$ $\alpha = .05$

H_1: $\mu_{ut} \neq \mu_{rvs}$

$N_{ut} = 44$

$\mu_{ut} = \sum X_{ut} / N_{ut} = 258/44 = 6.22222$

$S_{ut} = \sum(X_{ut} - \mu_{ut})^2 = 533.1818$

$S_{ut}^2 = S_{ut}/(N - 1) = 533.1818/43 = 12.399576$

$N_{rvs} = 132$

$\mu_{rvs} = \sum X_{rvs} / N_{rvs} = 664/132 = 5.030303$

$S_{rvs} = \sum(X_{rvs} - \mu_{rvs})^2 = 1513.879$

$S_{rvs}^2 = S_{rvs}/(N - 1) = 1513.879/131 = 11.55633$

$N_{ut} = 44$ $N_{rvs} = 132$

$S_{(\mu_{rvs} - \mu_{ut})} = \sqrt{[(S_{ut}^2 / N_{ut}) + (S_{rvs}^2)/N_{rvs})]} = \sqrt{[(12.399576/44) + (11.55633/132)]} = \sqrt{(0.2818085 + 0.0875479)} = \sqrt{0.3693564} = 0.6077469$

t-statistic = $(\mu_{rvs} - \mu_{ut})/s_{(\mu_{rvs} - \mu_{ut})} = |(5.030303 - 6.22222)/0.6077469| = 1.961206$

df = $N_{ut} + N_{rvs} - 2 = 44 + 132 - 2 = 174$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 174, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (1.961206) is **greater than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This **falls** in the critical region. Therefore, **H_0 is rejected**.

The conclusion is that the rankings of the untenured teachers for this survey item, "Knowledge of teaching resources, subject/curriculum, pedagogical content, and ways of teaching specific subject matter" **are statistically significantly different** from the rankings of the recently tenured teachers, veteran teachers, and school administrators combined with a confidence interval of 95%.

T-TEST L.7.2

T-TEST Comparing RECENTLY TENURED TEACHERS and SCHOOL ADMINISTRATORS (RTTSA) with UNTENURED TEACHERS (UT) for "Analyzing and understanding a range of teaching and learning styles"

H_0: $\mu_{rttsa} = \mu_{ut}$ $\alpha = .05$

H_1: $\mu_{rttsa} \neq \mu_{ut}$

$N_{rttsa} = 44$

$\mu_{rttsa} = \sum X_{rttsa} / N_{rttsa} = 283/44 = 6.431818$

$S_{rttsa} = \sum(X_{rttsa} - \mu_{rttsa})^2 = 330.7955$

$S_{rttsa}^2 = S_{rttsa}/(N - 1) = 330.7955/43 = 7.692919$

$N_{ut} = 56$

$\mu_{ut} = \sum X_{ut} / N_{ut} = 313/56 = 5.589286$

$S_{ut} = \sum(X_{ut} - \mu_{ut})^2 = 665.5536$

$S_{ut}^2 = S_{ut}/(N - 1) = 665.5536/55 = 12.100974$

$N_{rttsa} = 44$ $N_{ut} = 56$

$S_{(\mu_{ut} - \mu_{rttsa})} = \sqrt{[(S_{rttsa}^2 / N_{rttsa}) + (S_{ut}^2)/N_{ut})]} = \sqrt{[(7.692919/44) + (12.100974/56)]} =$

$\sqrt{(0.174839 + 0.216089)} = \sqrt{0.3909278} = 0.6252421$

t-statistic = $(\mu_{ut} - \mu_{rttsa})/s_{(\mu_{ut} - \mu_{rttsa})} = |(5.589286 - 6.431818)/0.6252421| = 1.347529$

df = $N_{rttsa} + N_{ut} - 2 = 44 + 56 - 2 = 98$

The critical t-value for (*df* = 80, $\alpha = .05$, one-tailed) = 1.664, and the critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660. Therefore, the critical t-value for (*df* = 98, $\alpha = .05$, one-tailed) lies between 1.660 and 1.664. The t-statistic for these data (1.347529) is **less than** the critical t-value (some value that lies in the region $1.660 < x < 1.664$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the untenured teachers for this survey item, "Analyzing and understanding a range of teaching and learning styles" are **not** statistically significantly different from the rankings of the recently tenured teachers, and school administrators combined with a confidence interval of 95%.

T-TEST L.7.3

T-TEST Comparing RECENTLY TENURED TEACHERS and SCHOOL ADMINISTRATORS (RTTSA) with VETERAN TEACHERS (VT) for "Analyzing and understanding a range of teaching and learning styles"

H_0: $\mu_{rttsa} = \mu_{vt}$ $\alpha = .05$

H_1: $\mu_{rttsa} \neq \mu_{vt}$

$N_{rttsa} = 44$

$\mu_{rttsa} = \sum X_{rttsa} / N_{rttsa} = 283/44 = 6.431818$

$S_{rttsa} = \sum(X_{rttsa} - \mu_{rttsa})^2 = 330.7955$

$S_{rttsa}^2 = S_{rttsa}/(N - 1) = 330.7955/43 = 7.692919$

$N_{vt} = 76$

$\mu_{vt} = \sum X_{vt} / N_{vt} = 531/76 = 6.986842$

$S_{vt} = \sum(X_{vt} - \mu_{vt})^2 = 672.9868$

$S_{vt}^2 = S_{vt}/(N - 1) = 672.9868/75 = 8.973157$

$N_{rttsa} = 44$ $N_{vt} = 76$

$S_{(\mu_{vt} - \mu_{rttsa})} = \sqrt{[(S_{rttsa}^2 / N_{rttsa}) + (S_{vt}^2)/N_{vt})]} = \sqrt{[(7.692919/44) + (8.973157/76)]} =$
$\sqrt{(0.174839 + 0.1180678)} = \sqrt{0.2929068} = 0.5412086$

t-statistic $= (\mu_{vt} - \mu_{rttsa})/s_{(\mu_{vt} - \mu_{rttsa})} = |(6.986842 - 6.431818)/0.5412086| = 1.025527$

df $= N_{rttsa} + N_{vt} - 2 = 44 + 76 - 2 = 118$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 118, $\alpha = .05$, one-tailed) lies between 1.646 and 1.660. The t-statistic for these data (1.025527) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.660$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the veteran teachers for this survey item, "Analyzing and understanding a range of teaching and learning styles" are **not** statistically significantly different from the rankings of the recently tenured teachers, and school administrators combined with a confidence interval of 95%.

T-TEST L.7.4

T-TEST Comparing VETERAN TEACHERS (VT) with UNTENURED TEACHERS, RECENTLY TENURED TEACHERS, and SCHOOL ADMINISTRATORS (URS) for "Addressing a variety of student evaluation processes using student assessment data to improve instruction"

H_0: $\mu_{vt} = \mu_{urs}$ $\alpha = .05$

H_1: $\mu_{vt} \neq \mu_{urs}$

$N_{vt} = 76$

$\mu_{vt} = \sum X_{vt} / N_{vt} = 520/76 = 6.842105$

$S_{vt} = \sum(X_{vt} - \mu_{vt})^2 = 714.1053$

$S_{vt}^2 = S_{vt}/(N - 1) = 714.1053/75 = 9.521404$

$N_{urs} = 100$

$\mu_{urs} = \sum X_{urs} / N_{urs} = 651/100 = 6.51$

$S_{urs} = \sum(X_{urs} - \mu_{urs})^2 = 820.99$

$S_{urs}^2 = S_{urs}/(N - 1) = 820.99/99 = 8.292828$

$N_{vt} = 76$ $N_{urs} = 100$

$S_{(\mu_{urs} - \mu_{vt})} = \sqrt{[(S_{vt}^2 / N_{vt}) + (S_{urs}^2)/N_{urs})]} = \sqrt{[(9.521404/76) + (8.292828/100)]} =$
$\sqrt{(0.1252816 + 0.0829282)} = \sqrt{0.2082098} = 0.4563$

t-statistic = $(\mu_{urs} - \mu_{vt})/s_{(\mu_{urs} - \mu_{vt})} = |(6.51 - 6.842105)/0.4563| = 0.727822$

df = $N_{vt} + N_{urs} - 2 = 76 + 100 - 2 = 174$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 174, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (0.727822) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the veteran teachers for this survey item, "Addressing a variety of student evaluation processes using student assessment data to improve instruction" are **not** statistically significantly different from the rankings of the untenured teachers, recently tenured teachers, and school administrators combined with a confidence interval of 95%.

T-TEST L.7.5

T-TEST Comparing UNTENURED TEACHERS with SCHOOL ADMINISTRATORS for "Relating lessons to real life, ensuring that students are aware of the substance and purpose of what they are being asked to do"

H_0: $\mu_{teach} = \mu_{adm}$ $\alpha = .05$

H_1: $\mu_{teach} \neq \mu_{adm}$

$N_{teach} = 44$

$\mu_{teach} = \sum X_{teach} / N_{teach} = 247/44 = 5.613636$

$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 392.4318$

$S_{teach}^2 = S_{teach}/(N - 1) = 392.4318/43 = 9.126321$

$N_{adm} = 18$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 115/18 = 6.388889$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 158.2778$

$S_{adm}^2 = S_{adm}/(N - 1) = 158.2778/17 = 9.310459$

$N_{teach} = 44$ $N_{adm} = 18$

$S_{(\mu_{adm} - \mu_{teach})} = \sqrt{[(S_{teach}^2 / N_{teach}) + (S_{adm}^2)/N_{adm})]} = \sqrt{[(9.126321/44) + (9.310459/18)]} =$
$\sqrt{(0.2074163 + 0.5172477)} = \sqrt{0.724664} = 0.8512719$

t-statistic = $(\mu_{adm} - \mu_{teach})/s_{(\mu_{adm} - \mu_{teach})} = |(6.388889 - 5.613636)/0.8512719| = 0.910692$

df = $N_{teach} + N_{adm} - 2 = 44 + 18 - 2 = 60$

The critical t-value for (*df* = 60, $\alpha = .05$, one-tailed) = 1.671. The t-statistic for these data (0.910692) is **less than** the critical t-value. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the untenured teachers for this survey item, "Relating lessons to real life, ensuring that students are aware of the substance and purpose of what they are being asked to do" are **not** statistically significantly different from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.7.6

T-TEST Comparing UNTENURED TEACHERS (UT) with VETERAN TEACHERS (VT) for "Relating lessons to real life, ensuring that students are aware of the substance and purpose of what they are being asked to do"

H_0: $\mu_{ut} = \mu_{vt}$ $\alpha = .05$

H_1: $\mu_{ut} \neq \mu_{vt}$

$N_{ut} = 44$

$\mu_{ut} = \sum X_{ut} / N_{ut} = 247/44 = 5.613636$

$S_{ut} = \sum(X_{ut} - \mu_{ut})^2 = 392.4318$
$S_{ut}^2 = S_{ut}/(N - 1) = 392.4318/43 = 9.126321$

$N_{vt} = 76$
$\mu_{vt} = \sum X_{vt} / N_{vt} = 471/76 = 6.197368$
$S_{vt} = \sum(X_{vt} - \mu_{vt})^2 = 824.0395$
$S_{vt}^2 = S_{vt}/(N - 1) = 824.0395/75 = 10.98719$

$N_{ut} = 44 \quad N_{vt} = 76$
$S_{(\mu_{vt} - \mu_{ut})} = \sqrt{[(S_{ut}^2 / N_{ut}) + (S_{vt}^2)/N_{vt})]} = \sqrt{[(9.126321/44) + (10.98719/76)]} =$
$\sqrt{(0.2074163 + 0.144568)} = \sqrt{0.351985} = 0.5932829$

t-statistic = $(\mu_{vt} - \mu_{ut})/s_{(\mu_{vt} - \mu_{ut})} = |(6.197368 - 5.613636)/0.5932829| = 0.983902$
df = $N_{ut} + N_{vt} - 2 = 44 + 76 - 2 = 118$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 118, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (0.983902) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the untenured teachers for this survey item, "Relating lessons to real life, ensuring that students are aware of the substance and purpose of what they are being asked to do" are **not** statistically significantly different from the rankings of the veteran teachers with a confidence interval of 95%.

T-TEST L.7.7

T-TEST Comparing RECENTLY TENURED TEACHERS with SCHOOL ADMINISTRATORS for "Relating lessons to real life, ensuring that students are aware of the substance and purpose of what they are being asked to do"

H_0: $\mu_{teach} = \mu_{adm}$ $\alpha = .05$
H_1: $\mu_{teach} \neq \mu_{adm}$

$N_{teach} = 38$
$\mu_{teach} = \sum X_{teach} / N_{teach} = 189/38 = 4.973684$
$S_{teach} = \sum(X_{teach} - \mu_{teach})^2 = 346.9737$
$S_{teach}^2 = S_{teach}/(N - 1) = 346.9737/37 = 9.377668$

$N_{adm} = 18$
$\mu_{adm} = \sum X_{adm} / N_{adm} = 115/18 = 6.388889$
$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 158.2778$
$S_{adm}^2 = S_{adm}/(N - 1) = 158.2778/17 = 9.310459$

$N_{teach} = 38 \quad N_{adm} = 18$
$S_{(\mu_{adm} - \mu_{teach})} = \sqrt{[(S_{teach}^2 / N_{teach}) + (S_{adm}^2)/N_{adm})]} = \sqrt{[(9.377668/38) + (9.310459/18)]} =$
$\sqrt{(0.246781 + 0.5172477)} = \sqrt{0.7640284} = 0.8740871$

t-statistic $= (\mu_{adm} - \mu_{teach})/s_{(\mu_{adm} - \mu_{teach})} = |(6.388889 - 4.973684)/0.8740871| = 1.619066$
$df = N_{teach} + N_{adm} - 2 = 38 + 18 - 2 = 54$

The critical t-value for (df = 50, α = .05, one-tailed) = 1.676, and the critical t-value for (df = 60, α = .05, one-tailed) = 1.671. Therefore, the critical t-value for (df = 54, α = .05, one-tailed) lies between 1.671 and 1.676. The t-statistic for these data (1.619066) is **greater than** the critical t-value (some value that lies in the region $1.671 < x < 1.676$), also rendering interpolation of the actual critical t-value unnecessary. This **falls** in the critical region. Therefore, **H_0 is rejected**.

The conclusion is that the rankings of the recently tenured teachers for this survey item, "Relating lessons to real life, ensuring that students are aware of the substance and purpose of what they are being asked to do" **are statistically significantly different** from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.7.8

T-TEST Comparing RECENTLY TENURED TEACHERS (RTT) with VETERAN TEACHERS (VT) for "Relating lessons to real life, ensuring that students are aware of the substance and purpose of what they are being asked to do"

H_0: $\mu_{rtt} = \mu_{vt}$ $\quad \alpha = .05$
H_1: $\mu_{rtt} \neq \mu_{vt}$

$N_{rtt} = 38$
$\mu_{rtt} = \sum X_{rtt} / N_{rtt} = 189/38 = 4.973684$
$S_{rtt} = \sum(X_{rtt} - \mu_{rtt})^2 = 346.9737$
$S_{rtt}^2 = S_{rtt}/(N - 1) = 346.9737/37 = 9.377668$

$N_{vt} = 76$
$\mu_{vt} = \sum X_{vt} / N_{vt} = 471/76 = 6.197368$

$S_{vt} = \sum(X_{vt} - \mu_{vt})^2 = 824.0395$
$S_{vt}^2 = S_{vt}/(N - 1) = 824.0395/75 = 10.98719$

$N_{rtt} = 38 \quad N_{vt} = 76$
$S_{(\mu_{vt} - \mu_{rtt})} = \sqrt{[(S_{rtt}^2 / N_{rtt}) + (S_{vt}^2)/N_{vt})]} = \sqrt{[(9.377668/38) + (10.98719/76)]} =$
$\sqrt{(0.246781 + 0.144568)} = \sqrt{0.3913487} = 0.6255786$

t-statistic $= (\mu_{vt} - \mu_{rtt})/s_{(\mu_{vt} - \mu_{rtt})} = |(6.197368 - 4.973684)/0.6255786| = 1.956084$
$df = N_{rtt} + N_{vt} - 2 = 38 + 76 - 2 = 112$

The critical t-value for (df = 100, α = .05, one-tailed) = 1.660, and the critical t-value for (df = 1000, α = .05, one-tailed) = 1.646. Therefore, the critical t-value for (df = 112, α = .05, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (1.956084) is **greater than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This **falls** in the critical region. Therefore, **H_0 is rejected**.

The conclusion is that the rankings of the recently tenured teachers for this survey item, "Relating lessons to real life, ensuring that students are aware of the substance and purpose of what they are being asked to do" **are statistically significantly different** from the rankings of the veteran teachers with a confidence interval of 95%.

T-TEST L.7.9

T-TEST Comparing UNTENURED TEACHERS (UT) with VETERAN TEACHERS (VT) for "Encouraging active student participation, using appropriate and varied questioning and discussion techniques, and incorporating pupil ideas"

H_0: $\mu_{ut} = \mu_{vt}$ $\quad \alpha = .05$
H_1: $\mu_{ut} \neq \mu_{vt}$

$N_{ut} = 44$
$\mu_{ut} = \sum X_{ut} / N_{ut} = 258/44 = 5.863636$
$S_{ut} = \sum(X_{ut} - \mu_{ut})^2 = 519.1818$
$S_{ut}^2 = S_{ut}/(N - 1) = 519.1818/43 = 12.073995$

$N_{vt} = 76$
$\mu_{vt} = \sum X_{vt} / N_{vt} = 397/76 = 5.223684$
$S_{vt} = \sum(X_{vt} - \mu_{vt})^2 = 583.1974$
$S_{vt}^2 = S_{vt}/(N - 1) = 583.1974/75 = 7.775965$

$N_{ut} = 44 \quad N_{vt} = 76$

$S_{(\mu_{vt} - \mu_{ut})} = \sqrt{[(S_{ut}^2 / N_{ut}) + (S_{vt}^2)/N_{vt})]} = \sqrt{[(12.073995/44) + (7.775965/76)]} =$
$\sqrt{(0.2744089 + 0.102315)} = \sqrt{0.3767242} = 0.6137786$

t-statistic $= (\mu_{vt} - \mu_{ut})/s_{(\mu_{vt} - \mu_{ut})} = |(5.223684 - 5.863636)/0.6137786| = 1.042643$

$df = N_{ut} + N_{vt} - 2 = 44 + 76 - 2 = 118$

The critical t-value for (df = 100, α = .05, one-tailed) = 1.660, and the critical t-value for (df = 1000, α = .05, one-tailed) = 1.646. Therefore, the critical t-value for (df = 118, α = .05, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (1.042643) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the untenured teachers for this survey item, "Encouraging active student participation, using appropriate and varied questioning and discussion techniques, and incorporating pupil ideas" are **not** statistically significantly different from the rankings of the veteran teachers with a confidence interval of 95%.

T-TEST L.7.10

T-TEST Comparing RECENTLY TENURED TEACHERS (RTT) with VETERAN TEACHERS (VT) for "Encouraging active student participation, using appropriate and varied questioning and discussion techniques, and incorporating pupil ideas"

H_0: $\mu_{rtt} = \mu_{vt}$ $\quad \alpha = .05$

H_1: $\mu_{rtt} \neq \mu_{vt}$

$N_{rtt} = 38$

$\mu_{rtt} = \sum X_{rtt} / N_{rtt} = 262/38 = 6.894737$

$S_{rtt} = \sum(X_{rtt} - \mu_{rtt})^2 = 387.5789$

$S_{rtt}^2 = S_{rtt}/(N - 1) = 387.5789/37 = 10.47511$

$N_{vt} = 76$

$\mu_{vt} = \sum X_{vt} / N_{vt} = 397/76 = 5.223684$

$S_{vt} = \sum(X_{vt} - \mu_{vt})^2 = 583.1974$

$S_{vt}^2 = S_{vt}/(N - 1) = 583.1974/75 = 7.775965$

$N_{rtt} = 44 \quad N_{vt} = 76$

$S_{(\mu_{vt} - \mu_{rtt})} = \sqrt{[(S_{rtt}^2 / N_{rtt}) + (S_{vt}^2)/N_{vt})]} = \sqrt{[(10.47511/38) + (7.775965/76)]} =$

$\sqrt{(0.275661 + 0.102315)} = \sqrt{0.3779756} = 0.614797$

t-statistic = $(\mu_{vt} - \mu_{rtt})/s_{(\mu_{vt} - \mu_{rtt})} = |(5.223684 - 6.894737)/0.614797| = 2.718322$
$df = N_{rtt} + N_{vt} - 2 = 38 + 76 - 2 = 112$

The critical t-value for (df = 100, α = .05, one-tailed) = 1.660, and the critical t-value for (df = 1000, α = .05, one-tailed) = 1.646. Therefore, the critical t-value for (df = 112, α = .05, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (2.718322) is **greater than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This **falls** in the critical region. Therefore, **H_0 is rejected**.

The conclusion is that the rankings of the recently tenured teachers for this survey item, "Encouraging active student participation, using appropriate and varied questioning and discussion techniques, and incorporating pupil ideas" **are statistically significantly different** from the rankings of the veteran teachers with a confidence interval of 95%.

T-TEST L.7.11

T-TEST Comparing SCHOOL ADMINISTRATORS with VETERAN TEACHERS (VT) for "Encouraging active student participation, using appropriate and varied questioning and discussion techniques, and incorporating pupil ideas"

H_0: $\mu_{adm} = \mu_{vt}$ α = .05
H_1: $\mu_{adm} \neq \mu_{vt}$

$N_{adm} = 18$
$\mu_{adm} = \sum X_{adm} / N_{adm} = 133/18 = 7.38889$
$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 118.2778$
$S_{adm}^2 = S_{adm}/(N - 1) = 118.2778/17 = 6.957518$

$N_{vt} = 76$
$\mu_{vt} = \sum X_{vt} / N_{vt} = 397/76 = 5.223684$
$S_{vt} = \sum(X_{vt} - \mu_{vt})^2 = 583.1974$
$S_{vt}^2 = S_{vt}/(N - 1) = 583.1974/75 = 7.775965$

$N_{adm} = 18$ $N_{vt} = 76$
$S_{(\mu_{vt} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{vt}^2)/N_{vt})]} = \sqrt{[(6.957518/18) + (7.775965/76)]} =$
$\sqrt{(0.3865287 + 0.102315)} = \sqrt{0.4888437} = 0.6991735$

t-statistic = $(\mu_{vt} - \mu_{adm})/s_{(\mu_{vt} - \mu_{adm})} = |(5.223684 - 7.38889)/0.6991735| = 3.096808$
$df = N_{adm} + N_{vt} - 2 = 18 + 76 - 2 = 92$

The critical t-value for (df = 80, α = .05, one-tailed) = 1.664, and the critical t-value for (df = 100, α = .05, one-tailed) = 1.660. Therefore, the critical t-value for (df = 92, α = .05, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (3.096808) is **greater than** the critical t-value (some value that lies in the region $1.660 < x < 1.664$), also rendering interpolation of the actual critical t-value unnecessary. This **falls** in the critical region. Therefore, **H_0 is rejected**.

The conclusion is that the rankings of the school administrators for this survey item, "Encouraging active student participation, using appropriate and varied questioning and discussion techniques, and incorporating pupil ideas" **are statistically significantly different** from the rankings of the veteran teachers with a confidence interval of 95%.

T-TEST L.7.12

T-TEST Comparing UNTENURED TEACHERS (UT) with RECENTLY TENURED TEACHERS (RTT) for "Encouraging active student participation, using appropriate and varied questioning and discussion techniques, and incorporating pupil ideas"

H_0: $\mu_{ut} = \mu_{rtt}$ α = .05
H_1: $\mu_{ut} \neq \mu_{rtt}$

$N_{ut} = 44$
$\mu_{ut} = \sum X_{ut} / N_{ut} = 258/44 = 5.863636$
$S_{ut} = \sum(X_{ut} - \mu_{ut})^2 = 519.1818$
$S_{ut}^2 = S_{ut}/(N - 1) = 519.1818/43 = 12.073995$

$N_{rtt} = 38$
$\mu_{rtt} = \sum X_{rtt} / N_{rtt} = 262/38 = 6.894737$
$S_{rtt} = \sum(X_{rtt} - \mu_{rtt})^2 = 387.5789$
$S_{rtt}^2 = S_{rtt}/(N - 1) = 387.5789/37 = 10.47511$

$N_{ut} = 44$ $N_{rtt} = 38$
$S_{(\mu_{rtt} - \mu_{ut})} = \sqrt{[(S_{ut}^2 / N_{ut}) + (S_{rtt}^2)/N_{rtt})]} = \sqrt{[(12.073995/44) + (10.47511/38)]} =$
$\sqrt{(0.2744089 + 0.275661)} = \sqrt{0.5500695} = 0.741667$

t-statistic = $(\mu_{rtt} - \mu_{ut})/s_{(\mu_{rtt} - \mu_{ut})} = |(6.894737 - 5.863636)/0.741667| = 1.390248$

$df = N_{ut} + N_{rtt} - 2 = 44 + 38 - 2 = 80$

The critical t-value for ($df = 80$, $\alpha = .05$, one-tailed) = 1.664. The t-statistic for these data (1.390248) is **less than** the critical t-value. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the untenured teachers for this survey item, "Encouraging active student participation, using appropriate and varied questioning and discussion techniques, and incorporating pupil ideas" are **not** statistically significantly different from the rankings of the recently tenured teachers with a confidence interval of 95%.

T-TEST L.7.13

T-TEST Comparing UNTENURED TEACHERS (UT) with SCHOOL ADMINISTRATORS for "Encouraging active student participation, using appropriate and varied questioning and discussion techniques, and incorporating pupil ideas"

H_0: $\mu_{ut} = \mu_{adm}$ $\alpha = .05$

H_1: $\mu_{ut} \neq \mu_{adm}$

$N_{ut} = 44$

$\mu_{ut} = \sum X_{ut} / N_{ut} = 258/44 = 5.863636$

$S_{ut} = \sum(X_{ut} - \mu_{ut})^2 = 519.1818$

$S_{ut}^2 = S_{ut}/(N - 1) = 519.1818/43 = 12.073995$

$N_{adm} = 18$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 133/18 = 7.38889$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 118.2778$

$S_{adm}^2 = S_{adm}/(N - 1) = 118.2778/17 = 6.957518$

$N_{ut} = 44$ $N_{adm} = 18$

$S_{(\mu_{adm} - \mu_{ut})} = \sqrt{[(S_{ut}^2 / N_{ut}) + (S_{adm}^2)/N_{adm})]} = \sqrt{[(12.073995/44) + (6.957518/18)]} = \sqrt{(0.2744089 + 0.3865387)} = \sqrt{0.6609476} = 0.8129868$

t-statistic = $(\mu_{adm} - \mu_{ut})/s_{(\mu_{adm} - \mu_{ut})} = |(7.38889 - 5.863636)/0.8129868| = 1.876155$

$df = N_{ut} + N_{adm} - 2 = 44 + 18 - 2 = 60$

The critical t-value for ($df = 60$, $\alpha = .05$, one-tailed) = 1.671. The t-statistic for these data (1.876155) is **greater than** the critical t-value. This **falls** in the critical region. Therefore, **H_0 is rejected**.

The conclusion is that the rankings of the untenured teachers for this survey item, "Encouraging active student participation, using appropriate and varied questioning and discussion techniques, and incorporating pupil ideas" **are statistically significantly different** from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.7.14

T-TEST Comparing RECENTLY TENURED TEACHERS (RTT) with SCHOOL ADMINISTRATORS for "Encouraging active student participation, using appropriate and varied questioning and discussion techniques, and incorporating pupil ideas"

H_0: $\mu_{rtt} = \mu_{adm}$ $\alpha = .05$

H_1: $\mu_{rtt} \neq \mu_{adm}$

$N_{rtt} = 38$

$\mu_{rtt} = \sum X_{rtt} / N_{rtt} = 262/38 = 6.894737$

$S_{rtt} = \sum(X_{rtt} - \mu_{rtt})^2 = 387.5789$

$S_{rtt}^2 = S_{rtt}/(N - 1) = 387.5789/37 = 10.475105$

$N_{adm} = 18$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 133/18 = 7.38889$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 118.2778$

$S_{adm}^2 = S_{adm}/(N - 1) = 118.2778/17 = 6.957518$

$N_{rtt} = 38$ $N_{adm} = 18$

$S_{(\mu_{adm} - \mu_{rtt})} = \sqrt{[(S_{rtt}^2 / N_{rtt}) + (S_{adm}^2)/N_{adm})]} = \sqrt{[(10.475105/38) + (6.957518/18)]} =$
$\sqrt{(0.275661 + 0.3865387)} = \sqrt{0.6621993} = 0.8137562$

t-statistic = $(\mu_{adm} - \mu_{rtt})/s_{(\mu_{adm} - \mu_{rtt})} = |(7.38889 - 6.894737)/0.8137562| = 0.6072494$

df = $N_{rtt} + N_{adm} - 2 = 38 + 18 - 2 = 54$

The critical t-value for (*df* = 50, $\alpha = .05$, one-tailed) = 1.676, and the critical t-value for (*df* = 60, $\alpha = .05$, one-tailed) = 1.671. Therefore, the critical t-value for (*df* = 54, $\alpha = .05$, one-tailed) lies between 1.671 and 1.676. The t-statistic for these data (0.607294) is **less than** the critical t-value (some value that lies in the region $1.671 < x < 1.676$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the recently tenured teachers for this survey item, "Encouraging active student participation, using appropriate and varied questioning and discussion techniques, and incorporating pupil ideas" are **not** statistically significantly different from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.7.15

T-TEST Comparing RECENTLY TENURED TEACHERS (RTT) with UNTENURED TEACHERS and VETERAN TEACHERS (UTVT) for "Special education issues"

H_0: $\mu_{rtt} = \mu_{utvt}$ $\alpha = .05$

H_1: $\mu_{rtt} \neq \mu_{utvt}$

$N_{rtt} = 38$

$\mu_{rtt} = \sum X_{rtt} / N_{rtt} = 264/38 = 6.947368$

$S_{rtt} = \sum(X_{rtt} - \mu_{rtt})^2 = 251.8947$

$S_{rtt}^2 = S_{rtt}/(N - 1) = 251.8947/37 = 6.807965$

$N_{utvt} = 120$

$\mu_{utvt} = \sum X_{utvt} / N_{utvt} = 900/120 = 7.5$

$S_{utvt} = \sum(X_{utvt} - \mu_{utvt})^2 = 1194$

$S_{utvt}^2 = S_{utvt}/(N - 1) = 1194/119 = 10.033613$

$N_{rtt} = 44$ $N_{utvt} = 76$

$S_{(\mu_{utvt} - \mu_{rtt})} = \sqrt{[(S_{rtt}^2 / N_{rtt}) + (S_{utvt}^2)/N_{utvt})]} = \sqrt{[(6.807965/38) + (10.033613/120)]} =$
$\sqrt{(0.179157 + 0.0836134)} = \sqrt{0.26277} = 0.5126113$

t-statistic $= (\mu_{utvt} - \mu_{rtt})/s_{(\mu_{utvt} - \mu_{rtt})} = |(7.5 - 6.947368)/0.5126113| = 1.078072$

$df = N_{rtt} + N_{utvt} - 2 = 38 + 120 - 2 = 156$

The critical t-value for (df = 100, α = .05, one-tailed) = 1.660, and the critical t-value for (df = 1000, α = .05, one-tailed) = 1.646. Therefore, the critical t-value for (df = 156, α = .05, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (1.078072) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the recently tenured teachers for this survey item, "Special education issues" are **not** statistically significantly different from the rankings of the untenured teachers and veteran teachers combined with a confidence interval of 95%.

T-TEST L.7.16

T-TEST Comparing RECENTLY TENURED TEACHERS (RTT) with UNTENURED TEACHERS and SCHOOL ADMINISTRATORS (UTSA) for "Engaging students in critical thinking, probing for knowledge, and providing feedback to students"

H_0: $\mu_{rtt} = \mu_{utsa}$ $\alpha = .05$

H_1: $\mu_{rtt} \neq \mu_{utsa}$

$N_{rtt} = 38$

$\mu_{rtt} = \sum X_{rtt} / N_{rtt} = 240/38 = 6.315789$

$S_{rtt} = \sum(X_{rtt} - \mu_{rtt})^2 = 314.2105$

$S_{rtt}^2 = S_{rtt}/(N - 1) = 314.2105/37 = 8.492176$

$N_{utsa} = 62$

$\mu_{utsa} = \sum X_{utsa} / N_{utsa} = 357/62 = 5.758065$

$S_{utsa} = \sum(X_{utsa} - \mu_{utsa})^2 = 499.371$

$S_{utsa}^2 = S_{utsa}/(N - 1) = 499.371/61 = 8.18641$

$N_{rtt} = 38$ $N_{utsa} = 62$

$S_{(\mu_{utsa} - \mu_{rtt})} = \sqrt{[(S_{rtt}^2 / N_{rtt}) + (S_{utsa}^2)/N_{utsa})]} = \sqrt{[(8.492176/38) + (8.18641/62)]} = \sqrt{(0.223478 + 0.132039)} = \sqrt{0.355517} = 0.5962522$

t-statistic = $(\mu_{utsa} - \mu_{rtt})/s_{(\mu_{utsa} - \mu_{rtt})} = |(5.758065 - 6.315789)/0.5962522| = 0.935383$

df = $N_{rtt} + N_{utsa} - 2 = 38 + 62 - 2 = 98$

The critical t-value for (*df* = 80, $\alpha = .05$, one-tailed) = 1.664, and the critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660. Therefore, the critical t-value for (*df* = 98, $\alpha = .05$, one-tailed) lies between 1.660 and 1.664. The t-statistic for these data (0.935383) is **less than** the critical t-value (some value that lies in the region $1.660 < x < 1.664$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the recently tenured teachers for this survey item, "Engaging students in critical thinking, probing for knowledge, and providing feedback to students" are **not** statistically significantly different from the rankings of the untenured teachers and school administrators combined with a confidence interval of 95%.

T-TEST L.7.17

T-TEST Comparing RECENTLY TENURED TEACHERS (RTT) with VETERAN TEACHERS (VT) for "Engaging students in critical thinking, probing for knowledge, and providing feedback to students"

H_0: $\mu_{rtt} = \mu_{vt}$ $\alpha = .05$

H_1: $\mu_{rtt} \neq \mu_{vt}$

$N_{rtt} = 38$

$\mu_{rtt} = \sum X_{rtt} / N_{rtt} = 240/38 = 6.315789$

$S_{rtt} = \sum(X_{rtt} - \mu_{rtt})^2 = 314.2105$

$S_{rtt}^2 = S_{rtt}/(N - 1) = 314.2105/37 = 8.492176$

$N_{vt} = 76$

$\mu_{vt} = \sum X_{vt} / N_{vt} = 483/76 = 6.355263$

$S_{vt} = \sum(X_{vt} - \mu_{vt})^2 = 617.4079$

$S_{vt}^2 = S_{vt}/(N - 1) = 617.4079/75 = 8.232105$

$N_{rtt} = 38$ $N_{vt} = 76$

$S_{(\mu_{vt} - \mu_{rtt})} = \sqrt{[(S_{rtt}^2 / N_{rtt}) + (S_{vt}^2)/N_{vt})]} = \sqrt{[(8.492176/38) + (8.232105/76)]} =$
$\sqrt{(0.223478 + 0.1083171)} = \sqrt{0.331795} = 0.576017$

t-statistic = $(\mu_{vt} - \mu_{rtt})/s_{(\mu_{vt} - \mu_{rtt})} = |(6.355263 - 6.315789)/0.576017| = 0.068529$

df = $N_{rtt} + N_{vt} - 2 = 38 + 76 - 2 = 112$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 112, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (0.068529) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the recently tenured teachers for this survey item, "Engaging students in critical thinking, probing for knowledge, and providing feedback to students" are **not** statistically significantly different from the rankings of the veteran teachers with a confidence interval of 95%.

T-TEST L.7.18

T-TEST Comparing VETERAN TEACHERS (VT) with UNTENURED TEACHERS and SCHOOL ADMINISTRATORS (UTSA) for "Engaging students in critical thinking, probing for knowledge, and providing feedback to students"

H_0: $\mu_{vt} = \mu_{utsa}$ $\alpha = .05$

H_1: $\mu_{vt} \neq \mu_{utsa}$

$N_{vt} = 76$

$\mu_{vt} = \sum X_{vt} / N_{vt} = 483/76 = 6.355263$

$S_{vt} = \sum(X_{vt} - \mu_{vt})^2 = 617.4079$

$S_{vt}^2 = S_{vt}/(N - 1) = 617.4079/75 = 8.232105$

$N_{utsa} = 62$

$\mu_{utsa} = \sum X_{utsa} / N_{utsa} = 357/62 = 5.758065$

$S_{utsa} = \sum(X_{utsa} - \mu_{utsa})^2 = 499.371$

$S_{utsa}^2 = S_{utsa}/(N - 1) = 499.371/61 = 8.18641$

$N_{vt} = 76$ $N_{utsa} = 62$

$S_{(\mu_{utsa} - \mu_{vt})} = \sqrt{[(S_{vt}^2 / N_{vt}) + (S_{utsa}^2)/N_{utsa})]} = \sqrt{[(8.232105/76) + (8.18641/62)]} =$
$\sqrt{(0.1083171 + 0.132039)} = \sqrt{0.2403561} = 0.4902612$

t-statistic $= (\mu_{utsa} - \mu_{vt})/s_{(\mu_{utsa} - \mu_{vt})} = |(5.758065 - 6.355263)/0.4902612| = 1.218122$

$df = N_{vt} + N_{utsa} - 2 = 76 + 62 - 2 = 136$

The critical t-value for (df = 100, α = .05, one-tailed) = 1.660, and the critical t-value for (df = 1000, α = .05, one-tailed) = 1.646. Therefore, the critical t-value for (df = 136, α = .05, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (1.218122) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the veteran teachers for this survey item, "Engaging students in critical thinking, probing for knowledge, and providing feedback to students" are **not** statistically significantly different from the rankings of the untenured teachers and school administrators combined with a confidence interval of 95%.

T-TEST L.7.19

T-TEST Comparing VETERAN TEACHERS (VT) with SCHOOL ADMINISTRATORS for "Setting clear targets and expectations for students' learning and achievement while linking performance to high standards"

H_0: $\mu_{vt} = \mu_{adm}$ $\alpha = .05$

H_1: $\mu_{vt} \neq \mu_{adm}$

$N_{vt} = 76$

$\mu_{vt} = \sum X_{vt} / N_{vt} = 438/76 = 5.763158$

$S_{vt} = \sum(X_{vt} - \mu_{vt})^2 = 821.7368$

$S_{vt}^2 = S_{vt}/(N - 1) = 821.7368/75 = 10.95649$

$N_{adm} = 18$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 123/18 = 6.833333$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 110.5$

$S_{adm}^2 = S_{adm}/(N - 1) = 110.5/17 = 6.5$

$N_{vt} = 76$ $N_{adm} = 18$

$S_{(\mu_{adm} - \mu_{vt})} = \sqrt{[(S_{vt}^2 / N_{vt}) + (S_{adm}^2)/N_{adm})]} = \sqrt{[(10.95649/76) + (6.5/18)]} =$
$\sqrt{(0.1441643 + 0.3611111)} = \sqrt{0.5052754} = 0.7108272$

t-statistic $= (\mu_{adm} - \mu_{vt})/s_{(\mu_{adm} - \mu_{vt})} = |(6.833333 - 5.763158)/0.7108272| = 1.505535$

$df = N_{vt} + N_{adm} - 2 = 76 + 18 - 2 = 92$

The critical t-value for (df = 80, α = .05, one-tailed) = 1.664, and the critical t-value for (df = 100, α = .05, one-tailed) = 1.660. Therefore, the critical t-value for (df = 92, α = .05, one-tailed) lies between 1.660 and 1.664. The t-statistic for these data (1.505535) is **less than** the critical t-value (some value that lies in the region $1.660 < x < 1.664$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the veteran teachers for this survey item, "Setting clear targets and expectations for students' learning and achievement while linking performance to high standards" are **not** statistically significantly different from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.7.20

T-TEST Comparing VETERAN TEACHERS (VT) with UNTENURED TEACHERS (UT) for "Setting clear targets and expectations for students' learning and achievement while linking performance to high standards"

H_0: $\mu_{vt} = \mu_{ut}$ $\alpha = .05$

H_1: $\mu_{vt} \neq \mu_{ut}$

$N_{vt} = 76$

$\mu_{vt} = \sum X_{vt} / N_{vt} = 438/76 = 5.763158$

$S_{vt} = \sum(X_{vt} - \mu_{vt})^2 = 821.7368$

$S_{vt}^2 = S_{vt}/(N - 1) = 821.7368/75 = 10.95649$

$N_{ut} = 44$

$\mu_{ut} = \sum X_{ut} / N_{ut} = 285/44 = 6.477273$

$S_{ut} = \sum(X_{ut} - \mu_{ut})^2 = 466.9773$

$S_{ut}^2 = S_{ut}/(N - 1) = 466.9773/43 = 10.859937$

$N_{vt} = 76$ $N_{ut} = 44$

$S_{(\mu_{ut} - \mu_{vt})} = \sqrt{[(S_{vt}^2 / N_{vt}) + (S_{ut}^2)/N_{ut})]} = \sqrt{[(10.95649/76) + (10.859937/44)]} =$
$\sqrt{(0.1441643 + 0.2468167)} = \sqrt{0.390981} = 0.6252847$

t-statistic $= (\mu_{ut} - \mu_{vt})/s_{(\mu_{ut} - \mu_{vt})} = |(6.477273 - 5.763158)/0.6252847| = 1.142064$

$df = N_{vt} + N_{ut} - 2 = 76 + 44 - 2 = 118$

The critical t-value for (df = 100, α = .05, one-tailed) = 1.660, and the critical t-value for (df = 1000, α = .05, one-tailed) = 1.646. Therefore, the critical t-value for (df = 118, α = .05, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (1.142064) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the veteran teachers for this survey item, "Setting clear targets and expectations for students' learning and achievement while linking performance to high standards" are **not** statistically significantly different from the rankings of the untenured teachers with a confidence interval of 95%.

T-TEST L.7.21

T-TEST Comparing VETERAN TEACHERS (VT) with RECENTLY TENURED TEACHERS (RTT) for "Setting clear targets and expectations for students' learning and achievement while linking performance to high standards"

H_0: $\mu_{vt} = \mu_{rtt}$ $\alpha = .05$

H_1: $\mu_{vt} \neq \mu_{rtt}$

$N_{vt} = 76$

$\mu_{vt} = \sum X_{vt} / N_{vt} = 438/76 = 5.763158$

$S_{vt} = \sum(X_{vt} - \mu_{vt})^2 = 821.7368$

$S_{vt}^2 = S_{vt}/(N - 1) = 821.7368/75 = 10.95649$

$N_{rtt} = 38$

$\mu_{rtt} = \sum X_{rtt} / N_{rtt} = 279/38 = 7.342105$

$S_{rtt} = \sum(X_{rtt} - \mu_{rtt})^2 = 308.5526$

$S_{rtt}^2 = S_{rtt}/(N - 1) = 308.5526/37 = 8.339259$

$N_{vt} = 76$ $N_{rtt} = 38$

$S_{(\mu_{rtt} - \mu_{vt})} = \sqrt{[(S_{vt}^2 / N_{vt}) + (S_{rtt}^2)/N_{rtt})]} = \sqrt{[(10.95649/76) + (8.339259/38)]} = \sqrt{(0.1441643 + 0.219454)} = \sqrt{0.363618} = 0.603008$

t-statistic $= (\mu_{rtt} - \mu_{vt})/s_{(\mu_{rtt} - \mu_{vt})} = |(7.342105 - 5.763158)/0.603008| = 2.6184511$

$df = N_{vt} + N_{rtt} - 2 = 76 + 38 - 2 = 112$

The critical t-value for (df = 100, α = .05, one-tailed) = 1.660, and the critical t-value for (df = 1000, α = .05, one-tailed) = 1.646. Therefore, the critical t-value for (df = 112, α = .05, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (2.6184511) is **greater than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This **falls** in the critical region. Therefore, **H_0 is rejected**.

The conclusion is that the rankings of the veteran teachers for this survey item, "Setting clear targets and expectations for students' learning and achievement while linking performance to high standards" **are statistically significantly different** from the rankings of the recently tenured teachers with a confidence interval of 95%.

T-TEST L.7.22

T-TEST Comparing SCHOOL ADMINISTRATORS with RECENTLY TENURED TEACHERS (RTT) for "Setting clear targets and expectations for students' learning and achievement while linking performance to high standards"

H_0: $\mu_{adm} = \mu_{rtt}$ $\alpha = .05$

H_1: $\mu_{adm} \neq \mu_{rtt}$

$N_{adm} = 18$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 123/18 = 6.833333$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 110.5$

$S_{adm}^2 = S_{adm}/(N - 1) = 110.5/17 = 6.5$

$N_{rtt} = 38$

$\mu_{rtt} = \sum X_{rtt} / N_{rtt} = 279/38 = 7.342105$

$S_{rtt} = \sum(X_{rtt} - \mu_{rtt})^2 = 308.5526$

$S_{rtt}^2 = S_{rtt}/(N - 1) = 308.5526/37 = 8.339259$

$N_{adm} = 18$ $N_{rtt} = 38$

$S_{(\mu_{rtt} - \mu_{adm})} = \sqrt{[(S_{adm}^2 / N_{adm}) + (S_{rtt}^2)/N_{rtt})]} = \sqrt{[(6.5/18) + (8.339259/38)]} =$

$\sqrt{(0.3611111 + 0.219454)} = \sqrt{0.580565} = 0.761948$

t-statistic $= (\mu_{rtt} - \mu_{adm})/s_{(\mu_{rtt} - \mu_{adm})} = |(7.342105 - 6.833333)/0.769148| = 0.661475$

$df = N_{adm} + N_{rtt} - 2 = 18 + 38 - 2 = 54$

The critical t-value for ($df = 50$, $\alpha = .05$, one-tailed) = 1.676, and the critical t-value for ($df = 60$, $\alpha = .05$, one-tailed) = 1.671. Therefore, the critical t-value for ($df = 54$, $\alpha = .05$, one-tailed) lies between 1.671 and 1.676. The t-statistic for these data (0.661475) is **less than** the critical t-value (some value that lies in the region $1.671 < x < 1.676$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the school administrators for this survey item, "Setting clear targets and expectations for students' learning and achievement while linking performance to high standards" are **not** statistically significantly different from the rankings of the recently tenured teachers with a confidence interval of 95%.

T-TEST L.7.23

T-TEST Comparing UNTENURED TEACHERS (UT) with RECENTLY TENURED TEACHERS (RTT) for "Setting clear targets and expectations for students' learning and achievement while linking performance to high standards"

H_0: $\mu_{ut} = \mu_{rtt}$ $\alpha = .05$

H_1: $\mu_{ut} \neq \mu_{rtt}$

$N_{ut} = 44$

$\mu_{ut} = \sum X_{ut} / N_{ut} = 285/44 = 6.477273$

$S_{ut} = \sum(X_{ut} - \mu_{ut})^2 = 466.9773$

$S_{ut}^2 = S_{ut}/(N - 1) = 466.9773/43 = 10.859937$

$N_{rtt} = 38$

$\mu_{rtt} = \sum X_{rtt} / N_{rtt} = 279/38 = 7.342105$

$S_{rtt} = \sum(X_{rtt} - \mu_{rtt})^2 = 308.5526$

$S_{rtt}^2 = S_{rtt}/(N - 1) = 308.5526/37 = 8.339259$

$N_{ut} = 44$ $N_{rtt} = 38$

$S_{(\mu_{rtt} - \mu_{ut})} = \sqrt{[(S_{ut}^2 / N_{ut}) + (S_{rtt}^2)/N_{rtt})]} = \sqrt{[(10.859937/44) + (8.339259/38)]} =$
$\sqrt{(0.246817 + 0.219454)} = \sqrt{0.466271} = 0.68284$

t-statistic $= (\mu_{rtt} - \mu_{ut})/s_{(\mu_{rtt} - \mu_{ut})} = |(7.342105 - 6.477273)/0.68284| = 1.266522$

$df = N_{ut} + N_{rtt} - 2 = 44 + 38 - 2 = 80$

The critical t-value for ($df = 80$, $\alpha = .05$, one-tailed) = 1.664. The t-statistic for these data (1.266522) is **less than** the critical t-value. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the untenured teachers for this survey item, "Setting clear targets and expectations for students' learning and achievement while linking performance to high standards" are **not** statistically significantly different from the rankings of the recently tenured teachers with a confidence interval of 95%.

T-TEST L.7.24

T-TEST Comparing VETERAN TEACHERS (VT) with SCHOOL ADMINISTRATORS for "Maximizing academic learning time and designing and planning coherent instruction with lesson clarity and instructional variety"

H_0: $\mu_{vt} = \mu_{adm}$ $\alpha = .05$

H_1: $\mu_{vt} \neq \mu_{adm}$

$N_{vt} = 76$

$\mu_{vt} = \sum X_{vt} / N_{vt} = 463/76 = 6.092105$

$S_{vt} = \sum(X_{vt} - \mu_{vt})^2 = 838.3553$

$S_{vt}^2 = S_{vt}/(N - 1) = 838.3553/75 = 11.17807$

$N_{adm} = 18$

$\mu_{adm} = \sum X_{adm} / N_{adm} = 125/18 = 6.944444$

$S_{adm} = \sum(X_{adm} - \mu_{adm})^2 = 218.9444$

$S_{adm}^2 = S_{adm}/(N - 1) = 218.9444/17 = 12.87908$

$N_{vt} = 76$ $N_{adm} = 18$

$S_{(\mu_{adm} - \mu_{vt})} = \sqrt{[(S_{vt}^2 / N_{vt}) + (S_{adm}^2)/N_{adm})]} = \sqrt{[(11.17807/76) + (12.87908/18)]} =$
$\sqrt{(0.1470798 + 0.7155044)} = \sqrt{0.8625842} = 0.9287541$

t-statistic = $(\mu_{adm} - \mu_{vt})/s_{(\mu_{adm} - \mu_{vt})} = |(6.944444 - 6.092105)/0.9287541| = 0.917723$

df = $N_{vt} + N_{adm} - 2 = 76 + 18 - 2 = 92$

The critical t-value for (*df* = 80, $\alpha = .05$, one-tailed) = 1.664, and the critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660. Therefore, the critical t-value for (*df* = 92, $\alpha = .05$, one-tailed) lies between 1.660 and 1.664. The t-statistic for these data (0.917723) is **less than** the critical t-value (some value that lies in the region $1.660 < x < 1.664$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the veteran teachers for this survey item, "Maximizing academic learning time and designing and planning coherent instruction with lesson clarity and instructional variety" are **not** statistically significantly different from the rankings of the school administrators with a confidence interval of 95%.

T-TEST L.7.25

T-TEST Comparing VETERAN TEACHERS (VT) with UNTENURED TEACHERS and RECENTLY TENURED TEACHERS (UTRTT) for "Maximizing academic learning time and designing and planning coherent instruction with lesson clarity and instructional variety"

H_0: $\mu_{vt} = \mu_{utrtt}$ $\alpha = .05$

H_1: $\mu_{vt} \neq \mu_{utrtt}$

$N_{vt} = 76$

$\mu_{vt} = \sum X_{vt} / N_{vt} = 463/76 = 6.092105$

$S_{vt} = \sum(X_{vt} - \mu_{vt})^2 = 838.3553$

$S_{vt}^2 = S_{vt}/(N - 1) = 838.3553/75 = 11.17807$

$N_{utrtt} = 82$

$\mu_{utrtt} = \sum X_{utrtt} / N_{utrtt} = 564/82 = 6.878049$

$S_{utrtt} = \sum(X_{utrtt} - \mu_{utrtt})^2 = 1026.78$

$S_{utrtt}^2 = S_{utrtt}/(N - 1) = 1026.78/81 = 12.676296$

$N_{vt} = 76$ $N_{utrtt} = 82$

$S_{(\mu_{utrtt} - \mu_{vt})} = \sqrt{[(S_{vt}^2 / N_{vt}) + (S_{utrtt}^2)/N_{utrtt})]} = \sqrt{[(11.17807/76) + (12.676296/82)]} =$
$\sqrt{(0.1470798 + 0.1545889)} = \sqrt{0.3016687} = 0.5492437$

t-statistic $= (\mu_{utrtt} - \mu_{vt})/s_{(\mu_{utrtt} - \mu_{vt})} = |(6.878049 - 6.092105)/0.5492437| = 1.430957$

df $= N_{vt} + N_{utrtt} - 2 = 76 + 82 - 2 = 156$

The critical t-value for (*df* = 100, $\alpha = .05$, one-tailed) = 1.660, and the critical t-value for (*df* = 1000, $\alpha = .05$, one-tailed) = 1.646. Therefore, the critical t-value for (*df* = 136, $\alpha = .05$, one-tailed) lies between 1.660 and 1.646. The t-statistic for these data (1.430957) is **less than** the critical t-value (some value that lies in the region $1.646 < x < 1.646$), also rendering interpolation of the actual critical t-value unnecessary. This does **not** fall in the critical region. Therefore, **H_0 is accepted**.

The conclusion is that the rankings of the veteran teachers for this survey item, "Maximizing academic learning time and designing and planning coherent instruction with lesson clarity and instructional variety" are **not** statistically significantly different from the rankings of the untenured teachers and recently tenured teachers combined with a confidence interval of 95%.

APPENDIX M
Survey Items with Statistically Significant Differences Between Samples of Study Groups

I. Remaining calm and professional in the face of unnerving situations while learning to quickly recover from mistakes.

significantly more important	significantly less important
recently tenured teachers & veteran teachers combined	school administrators

II. Providing new teachers with co-planning and mentoring time with other teachers and peers.

significantly more important	significantly less important
untenured teachers, recently tenured teachers, & veteran teachers combined	school administrators

III. Supporting improvement of teaching practice at teachers' individual points of need.

significantly more important	significantly less important
school administrators	all teacher groups combined

IV. Supporting improvement of teaching practice at teachers' individual points of need.

significantly more important	significantly less important
school administrators	veteran teachers

V. Time for sustained, school-based professional development and lifelong learning opportunities, including workshops and/or conferences.

significantly more important	significantly less important
untenured teachers, recently tenured teachers, & school administrators combined	veteran teachers

VI. Being observed by the superintendent, principals, and/or other administrators.

significantly more important	significantly less important
untenured teachers & recently tenured teachers combined	veteran teachers & school administrators combined

VII. Receiving formal written evaluations from an administrator that links teaching to student achievement.

significantly more important	significantly less important
untenured teachers	recently tenured teachers, veteran teachers, & school administrators combined

VIII. Informal visits and conversations and receiving informal administrative feedback.

significantly more important	significantly less important
school administrators	untenured teachers

IX. Informal visits and conversations and receiving informal administrative feedback.

significantly more important	significantly less important
school administrators	veteran teachers

X. Maintaining accurate records and documentation.

significantly more important	significantly less important
veteran teachers	recently tenured teachers

XI. Effective time management with high student levels of time on task.

significantly more important	significantly less important
recently tenured teachers & school administrators combined	untenured teachers & veteran teachers combined

XII. Avoiding "down-time" strategies and set of quick and easy backups for when things don't go as expected.

significantly more important	significantly less important
recently tenured teachers	veteran teachers & school administrators combined

XIII. Avoiding "down-time" strategies and set of quick and easy backups for when things don't go as expected.

significantly more important	significantly less important
recently tenured teachers	untenured teachers

XIV. Knowledge of teaching resources, subject/curriculum, pedagogical content, and ways of teaching specific subject matter.

significantly more important	significantly less important
recently tenured teachers, veteran teachers, & school administrators combined	untenured teachers

XV. Relating lessons to real life, ensuring that students are aware of the substance and purpose of what they are being asked to do.

significantly more important	significantly less important
recently tenured teachers	school administrators

XVI. Relating lessons to real life, ensuring that students are aware of the substance and purpose of what they are being asked to do.

significantly more important	significantly less important
recently tenured teachers	veteran teachers

XVII. Encouraging active student participation, using appropriate and varied questioning and discussion techniques and incorporating student ideas.

significantly more important	significantly less important
veteran teachers	recently tenured teachers

XVIII. Encouraging active student participation, using appropriate and varied questioning and discussion techniques and incorporating student ideas.

significantly more important	significantly less important
veteran teachers	school administrators

XIX. Encouraging active student participation, using appropriate and varied questioning and discussion techniques and incorporating student ideas.

significantly more important	significantly less important
untenured teachers	school administrators

XX. Setting clear targets and expectations for students' learning and achievement while linking performance to high standards.

significantly more important	significantly less important
veteran teachers	recently tenured teachers

Number of Statistically Significant Differences Between Samples of Study Groups

significantly more important	significantly less important	# of occurrences
untenured teachers	school administrators	1
untenured teachers	recently tenured teachers, veteran teachers, & school administrators combined	1
recently tenured teachers	untenured teachers	1
recently tenured teachers	veteran teachers	1
recently tenured teachers	school administrators	1
recently tenured teachers	veteran teachers & school administrators combined	1
veteran teachers	recently tenured teachers	3
veteran teachers	school administrators	1
school administrators	untenured teachers	1
school administrators	veteran teachers	2
school administrators	untenured teachers & recently tenured teachers combined	1

untenured teachers & recently tenured teachers combined	veteran teachers & school administrators combined	1
untenured teachers, recently tenured teachers, & veteran teachers combined	school administrators	1
untenured teachers, recently tenured teachers, & school administrators combined	veteran teachers	1
recently tenured teachers & veteran teachers combined	school administrators	1
recently tenured teachers, veteran teachers, & school administrators combined	untenured teachers	1
recently tenured teachers & school administrators combined	untenured teachers & veteran teachers combined	1

APPENDIX N
Top Three *Most* Important Items in Each Section of the Survey as Ranked by All Participants (* indicates ranking was unanimous for all study groups)

Section I: Psychological & Cultural

* 1. Maintaining a positive attitude, experiencing and building on successes, and receiving emotional support.
2. High expectations of what pupils can achieve to establish a culture for learning and student motivation.
3. Remaining calm and professional in the face of unnerving situations while learning to quickly recover from mistakes.

Section II: Interactions & Communication

1. Providing new teachers with co-planning and mentoring time with other teachers and peers.
2. Participating in new teacher study/support/discussion groups dedicated to sharing information about successes and concerns, to effective practice, and to action research.
3. Availability of experienced colleagues who will take new teachers' daily dilemmas seriously.

Section III: Structure of Induction Program

* 1. The new teacher induction program addressing the immediate needs of new teachers.
2. Individual follow-up of induction program by experienced educators so that new teachers learn to use new skills effectively in their classrooms.
3. Having a new teacher survey to assess needs of new teachers.

Section IV: Professional & Support

* 1. Mentors to demonstrate teaching methods and to assist with lesson plans for student mastery.
2. Demonstrating knowledge of content and professional practice while strengthening knowledge and skills.
3. Time for sustained, school-based professional development and lifelong learning opportunities, including workshops and/or conferences.

Section V: Observations & Feedback

1. Being observed by and receiving coaching with other experienced teachers and mentors.
2. Specific suggestions and feedback from observations about what can be done better.
3. Opportunities for classroom visits and observations of other teachers.

Section VI: Procedural & Managerial

* 1. Addressing effective classroom management procedures and routines.
* 2. Addressing school and district procedures for student discipline, defusing potential discipline problems, and dealing with difficult students.
3. Having a "start-of-school" checklist.

Section VII: Instructional

* 1. Using effective instructional practices, strategies, and techniques, and selecting instructional goals.
2. Knowledge of teaching resources, subject/curriculum, pedagogical content, and ways of teaching specific subject matter.
3. Relating lessons to real life, ensuring that students are aware of the substance and purpose of what they are being asked to do.

Top Three *Least* Important Items in Each Section of the Survey as Ranked by All Participants (* indicates ranking was unanimous for all study groups)

Section I: Psychological & Cultural

10. Dealing with fatigue.
9. Understanding of cultural and ethnic differences.
8. Focusing on "survival level" of teacher development.

Section II: Interactions & Communication

* 8. Bus tour of school district.
* 7. New teacher supervision of volunteers and paraprofessionals.
* 6. Clarity about the purpose and intended outcomes of the induction program.

Section III: Structure of Induction Program

8. The induction program consisting primarily of formal seminars.
7. The new teacher induction program addressing long-term career goals.
* 6. The induction program consisting primarily of informal workshops.

Section IV: Professional & Support

* 11. Receiving guidance for collecting artifacts for a portfolio.
10. Contributing to the school and district and participating in school functions.
9. Learning what it means to be a professional and acquiring a professional vocabulary.

Section V: Observations & Feedback

9. Supervision is distributed throughout the faculty in an organized, consistent, and continuous program.
8. Being observed by the superintendent, principals, and/or other administrators.
7. Receiving formal written evaluations from an administrator that links teaching to student achievement.

Section VI: Procedural & Managerial

* 11. Providing a plan for substitute teachers.
10. Assigning new teachers to smaller classes, reduced work loads, and reduced number of course preparations.
9. Movement of students (start and end of a period or day, fire drills, crisis drills, etc.).

Section VII: Instructional

* 12. Integration and use of technology.
* 11. Planning, organizing and managing instruction and physical space.
10. Special education issues.